RJRMU

Resident Journal of Rawalpindi Medical University

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The Resident Journal of Rawalpindi Medical University (RJRMU) is an official publication of Rawalpindi Medical University. It was first published in 2020. Till now, it has been published yearly.

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Renal Transplant At Benazir Bhutto Hospital: Challenges And Way Forward

Dr. Rameez Ahmed Mughal[1]

1. Registrar ,Department of Urology, Benazir Bhutto Shaheed Hospital, Rawalpindi

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Introduction:

In Pakistan the prevalence of chronic illnesses, such as diabetes and hypertension, is increasing which over the time have disastrous effects on kidneys resulting chronic kidney disease (CKD). CKD ultimately deteriorates the function of kidneys ultimately ending up in end stage renal disease (ESRD). In March 2020, a report published by DAWN newspaper stated that approximately 17 million people are suffering from kidney diseases, which is an alarming statistic. CKD is rapidly rising due to increasing diabetes, and high blood pressure, and kidney stone disease [(1)]

Due to reporting issues and lack of central renal data registry, it is difficult to accurately estimate the number of people suffering from end-stage renal disease and needing renal replacement therapy (RRT). Kidney transplantation is the only viable option for these patients having good long term outcomes and quality of life as compared to other available treatment options. [(1)]

Need for Transplant:

Kidney transplantation is the preferred form of treatment for patients with end-stage renal disease (ESRD), as it offers a better quality of life and is also cheaper than chronic maintenance dialysis in the long term.

For example, Hemodialysis cost around 50,000 to 90,000 US dollars per year, whereas total expenditures after kidney transplant cost approximately 10,000 to 20,000 per year, including the cost of immunosuppressive drugs..[2-5]

Problems in Public Sector Hospitals:

Major hurdles faced in public sector hospitals are lack of infrastructure, system and inter departmental coordination, availability of trained staff and personnel.[6]

Other problems that pose financial burden are tissue typing and cross matching facilities, Donor and recipient organ acquisition program and required resources for intensive care of patients. Specifically, decreased availability of organs due to limited number of live related donors also pose a problem.[6]

Social norms, specific religious beliefs and practices, certain cultural factors and absence of proper legislation may also curb kidney transplant programs by reducing the accessibility of live related, live non-related and deceased organs donations. [6]

Financial constraints in low to middle income countries are major contributors in hindrance of development of transplant programs. For

example, Pakistan reserves only 0.9% of its total Gross domestic product (GDP), whereas in comparison United States spends nearly 18% of the Gross Domestic Product (GDP) on healthcare services. In Pakistan, estimated per capita income is US$ 1,260 per year, whereas in center hemodialysis services cost about US$ 4,669. The approximate cost of dialysis per year is around 4 times per capita annual income in Pakistan. Hence people can't afford hemodialysis except for one or two weekly sessions. This greatly impacts the quality of life.[7]

Problems on the Part of Patients:

Successful transplant relies on the ability of patient to strictly adhere to clinical follow-ups, regular laboratory tests and medication (immunosuppressive) intake. Non-adherence to the follow up is common after transplant surgeries, it increases with time, may contribute to poor functioning graft, even rejection and loss of graft. Many aspects contribute to the non-compliance of patients namely, poor health literacy, certain health beliefs, low socio-economic status, cognitive impairment, low social support, low literacy rate, psychiatric disorders, cost of immunosuppressive drugs etc. [8]

Our Institutional Experience:

Many state of the art surgical procedures are being performed in department of urology and kidney transplant Benazir Bhutto Hospital , including minimally invasive surgeries like mini PCNL (percutaneous lithotomy), URS (ureterorenoscopy), LASER procedures for stones and prostate, reconstructive procedures (augmentation cystoplasties), urethroplasty etc , and to achieve further excellence in the field of urology the rumination and foundation of the Renal Transplant Unit, Benazir Bhutto Hospital, Rawalpindi Medical University successfully materialized in 2020. It is a privilege for this unit to be recognized by Punjab Human Organ Transplantation Authority (PHOTA) as a transplant unit in public sector of Punjab.[(9)] The core perspective was firstly to deal with the increasing burden of ESRD in the twin cities (Islamabad and Rawalpindi), as well as in the whole Punjab up to Azad Kashmir, Gilgit and Baltistan. Secondly, to start a social welfare program by the name : "NAI ZINDAGI" , which further enables the patients to come forward for kidney transplant by decreasing initial expenses by almost 90%.

The first patient selected for transplant was found out to be Hepatitis B positive, causing delay in the functioning of transplant surgery. Later the year pandemic of COVID – 19 hit the globe and all elective surgeries had to be postponed, further delaying the work of transplant unit. Then in June 2021 first successful renal transplant was done. The patient was from fateh jang and donor was his sister. All the above mentioned problems were encountered but successfully managed by the team of urologists and nephrologists. This venture was totally free of cost. Surgery and post op period were un eventful and he was discharged after 10 days with normalizing RFTs (renal function tests).

Future Aims and Perspectives:

Given the dawn of our Renal Transplant Unit, we also plan to regularize the transplants performing at least 3 transplants per month as per the vision of the head of department.

Renal transplant modality is evolving by scientific researches guiding transplant practices. Therefore the institution intends to create research impact through in depth

understanding of the mechanisms of renal transplant rejections. There will be enormous clinical data upon accomplishment of our research plan. This is in accordance with our research oriented Rawalpindi Medical University.

Patients having limited resources and income would greatly benefit from our institutional transplant practices (totally free of cost procedure). Our motto of selflessness and patient care above all, will benefit patients from all over Pakistan.

Way Forward

Self-sufficiency approach Key features of this approach are:

1. Legislation – for deceased organs donation and live non related organs donation
   (i) Healthcare infrastructure upgradation – provision of necessary facilities to carry out transplant surgeries, operation theatres and equipments etc.
   (ii) Registries and data collection – central database for ESRD patients / potential renal transplant candidates / recipients.
   (iii) Community consultation – a multifaceted approach to policy making that considers the development of synergistic strategies that optimize the use of resources. The importance of the role of government, professionals and community, and the ethos of equity, reciprocity and public ownership of transplantation.(10)
2. Mass Media health campaigns to sensitize community regarding organ donations and financial aid. Also increasing awareness regarding CKD and ESRD.[10]
3. Adopting the financing model of community-government partnership. This model enhances the role of society to work in synchronization with government and public sector hospitals in provision of financial support for poor people in terms of costs involved in laboratory tests, pre transplant and post transplant medications etc[11]

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Managing the traumatic extradural hematoma: Our experience of a tertiary care hospital

Saad Javed[1], Eesha Yaqoob[2], Sania Bhatti[3], Muhammad Asad Asif[4]

[1]Registrar, Department of Neurosurgery, Holy Family Hospital, Rawalpindi Medical University, Rawalpindi, Pakistan[1]

[2]PhD Sociology, Pir Mehr Ali Shah Arid Agriculture University; MSPH Scholar, Health Services Academy, Islamabad, Pakistan[2]

[3]Resident, Department of Neurosurgery, Holy Family Hospital, Rawalpindi Medical University, Rawalpindi, Pakistan[3]

[4]House Officer, Department of Neurosurgery, Holy Family Hospital, Rawalpindi Medical University[4]

Author's Contribution

[1,2] Conception of study
[1,4] Experimentation/Study conduction
[3] Analysis/Interpretation/Discussion
[1,2,4] Manuscript Writing
[2] Critical Review
[3] Facilitation and Material analysis

Corresponding Author

Saad Javed[1]
Registrar, Department of Neurosurgery, Holy Family Hospital, Rawalpindi Medical University, Rawalpindi, Pakistan
Email: saadjaved10095@gmail.com

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Introduction:

The skull is made up of a combination of many flat bones, which are fused together by cranial sutures. Each of the flat bones is composed of the following three parts: the outer table, spongy diploe, and inner table. The inner table is made up of a fibrous, thick layer that is called the Dura Mater. This dura mater is on top of another avascular membrane, which also aids in protecting the brain and spinal cord, called the arachnoid mater. Between the arachnoid and the dura mater lies a space called the subdural space.[1-3]

An interruption in the integrity of the skull bone is defined as a skull fracture which commonly results due to direct physical trauma, road traffic accidents or falling from heights. Absence of a visible external fracture does not necessarily mean that the cranial contents have not sustained any damage. If the direct force is extreme, the skull may fracture at or close to the impact the site. Simple skull fractures can rarely lead to neurological deficits, but the associated intracranial injuries may cause serious neurological results. [3, 4]

Traumatic brain injury may be associated with a hematoma inside the skull, most frequently an extradural hematoma (EDH). This develops due to accumulation of blood between layers of dura mater and table of skull. Since the dura mater layer also covers the spinal cord, the risk of spinal cord hemorrhage may also be high. Increased intracranial pressure could make things worse by compressing the sensitive brain tissues and causing brain shift. [5]

Extradural hematoma is thought to develop in ten to twenty percent of patients with head injuries. Following a head injury, extradural hematomas can develop in about 17% of patients who were conscious at the time and fall into a coma. Using the Nationwide Inpatient Sample, a retrospective analysis of extradural hematoma cases in the United States was conducted. A total of 5,189 extradural hematoma cases were identified and hospitalized, with hospital-acquired complications and mortality rates of 2.9% and 3.5%, respectively. [6]

Intracerebral bleeding, extradural or subdural hematomas, diffuse axonal injury, and extradural hematoma are all presentations of a traumatic brain injury. [7] Middle Meningeal artery is the main culprit behind the development of an EDHIt is most frequently at the temporal bone where the middle meningeal artery ruptures. Due to the thinner bone there, the parietotemporal region is frequently involved in skull vault fractures. Even if there is no evidence of a skull fracture (15%), the trauma to the temporal bone may result in a tear of the temporal artery. Extradural or epidural hemorrhage, which manifests as a space-occupying lesion, is a hematoma that forms between the dura and the skull as a result of bleeding from the middle meningeal arteries that has accumulated. This may appear right away following an accident or later. [1, 8]

Clinical examination-based signs are less reliable predictors of intracranial injury. Radiographic imaging of asymptomatic patients with notable scalp hematomas can be used to diagnose a significant number of patients with intracranial injuries. Patients who are asymptomatic and do not have a significant scalp hematoma can be safely managed without radiographic imaging. [9, 10] According to a study done in Peshawar, of the patients who had head injuries, skull fractures

were discovered in 31.09% of the cases, and of those, 8.53% had an EDH. [11]

The purpose of this study is to evaluate the prevalence of extradural hematoma in patients with skull fracture and skull fracture on x-ray skull in patients presenting with head injury. There is little chance of extradural hematoma in patients with skull fractures, according to the literature. However, this was the only study done in Pakistan, and no additional supporting data have been reported. We therefore conducted this study to determine the extent of the issue since patients with skull fractures typically have a higher risk of developing an extradural hematoma. This would enhance our practice and allow us to screen patients with a skull injury early for extradural hematoma so that early management could begin.

Material and methods:

Study includes statistical analysis of patients with Extradural Hematoma at Department of Neurosurgery. Data of 32 patients was analyzed in DHQ Hospital Rawalpindi who presented in emergency Department of DHQ Hospital Rawalpindi from 15/09/21to 01/05/22.

EPIDEMIOLOGICAL VARIABLES:

a) NAME

b) AGE.

c) GENDER.

d) AREA oF RESIDENCE.

e) SOCIOECNOMIC STATUS.

CLINICAL VARIABLES:

a) Type of Injury

b) Mode of Injury

c) Bike Rider (Helmet / without Helmet)

d) Time Between the Trauma & Surgery Early/Delayed

e) Managed Conservatively/ Surgical Evacuation.

f) Outcomes of Surgical Evacuation

Associated injuries with extradural Hematoma and complications of the surgical evacuation were included in exclusion criteria

Descriptive data analysis:

Data was analyzed in SPSS Software. Factors contributing to the outcomes of surgical evacuation like type of injury, mode of injury, early vs delayed presentation, patients with and without helmets, and types of management were kept as dependent variables and the rest of the factors were considered as an independent variables.

Percentage of the different factors contributing to the outcomes of surgical evacuation of extradural hematoma studied.

Results:

Type of Injury

Mild head injury

If the loss of consciousness is less than 30 minutes and amnesia of less than 24 hours and presenting GCS is between 13 to 15 is called as mild head injury

Moderate head injury

If the loss of consciousness is more than 30 minutes and amnesia of more than 24 hours and presenting GCS is between 9 to 12 is considered as moderate head injury

Severe head injury

If the loss of consciousness is more than 30 minutes and amnesia of more than 7days and GCS is less than 9 is called as severe head Injury.

Table 1:

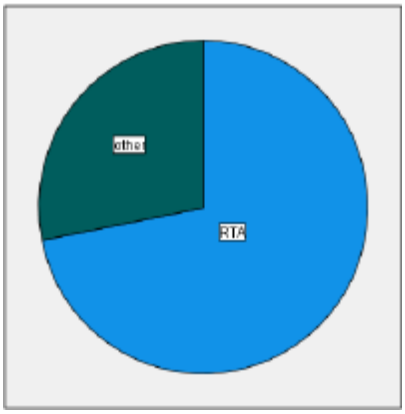
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Moderate	10	31.3	31.3	31.3
	Mild	18	56.3	56.3	87.5
	severe	4	12.5	12.5	100.0
	Total	32	100.0	100.0	

Mode of Injury:

Table 2:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	RTA	23	71.9	71.9	71.9
	other	9	28.1	28.1	100.0
	Total	32	100.0	100.0	

Figure 1:



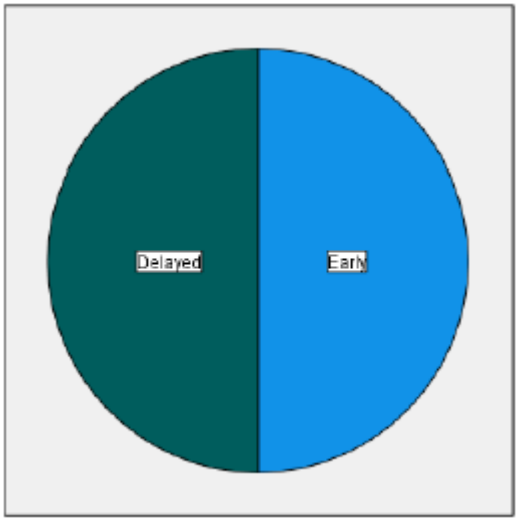
Early/Delayed Presentation:

Those patients who presented early and operated within 4 hours after the trauma kept as an early presentation and those who presented late and operated after 4 hours of the trauma considered as late in presentation

Table 3:

	Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	Early	16	50.0	50.0	50.0
	Delayed	16	50.0	50.0	100.0
	Total	32	100.0	100.0	

Figure 2:

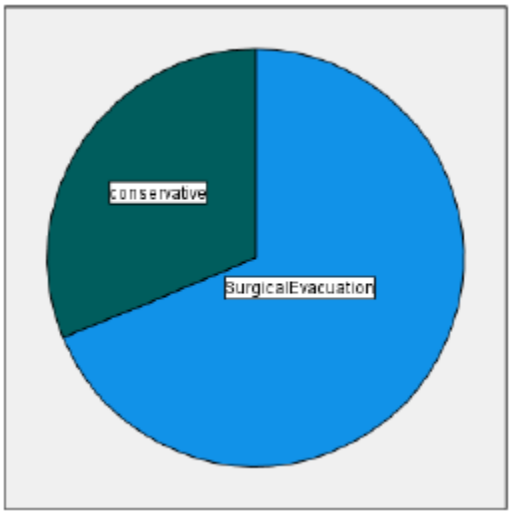


Types of Management:

Table 4:

	Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	Surgical Evacuation	22	68.8	68.8	68.8
	conservative	10	31.3	31.3	100.0
	Total	32	100.0	100.0	

Figure 3:

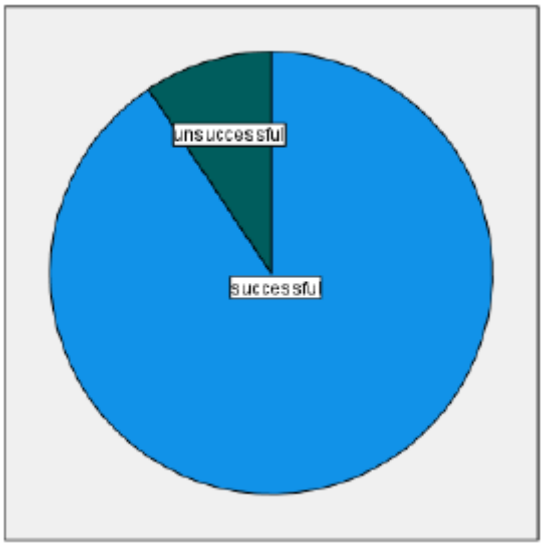


Outcomes of surgery:

Table 5:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	successful	29	90.6	90.6	90.6
	unsuccessful	3	9.4	9.4	100.0
	Total	32	100.0	100.0	

Figure 4:



Discussion:

A number of factors contribute to the outcomes of surgical evacuation done in the case of extradural hematoma. The success rate of the evacuation of the Hematoma depends upon the early diagnosis and management of the extradural Hematoma[12]. In this study, a total of 32 cases, presented themselves with a history of extradural Hematoma in the emergency of the neurosurgical department of district headquarters Teaching Hospital Rawalpindi. The patients were divided into three categories those with a loss of consciousness of fewer than 30 minutes and amnesia of fewer than 24 hours are categorized into mild head injury. The patients with a loss of consciousness for more than 30 minutes and amnesia of more than 7 hours were categorized into severe head injuries. Anything between these two was classified into the moderate category. The most common cause of epidural Hematoma in our study was found to be road traffic accidents. 23 out of the 32 patients had suffered a head injury due to a road traffic accident (71.9 percent) which is much greater than the percentage according to another study which was found to be 46 %[13]. One of the significant reasons for this high percentage is the lack of compliance with road traffic laws, for example, not wearing a helmet. According to another study, the History of falls from height takes precedence over the RTAs as being the major cause of head injury[14]. In our study cases due to causes other than road traffic accidents were labeled as 'other' and they had a percentage of 28.1 overall. These causes include falling from a height, a sudden blow to the head, a history of fights, etc. Out of the 32 patients in our study, 50% of the patients demonstrated an early presentation of the disease, and the remaining 50% presented delayed symptoms of extradural Hematoma. The most common symptoms of extradural hematoma include nausea, vomiting, hyperreflexia, and spasticity. The delayed presentation of the

clinical symptoms is somewhat uncommon Import the incidence and the prognosis is decreased in this situation[15]. The primary cause of extradural hematoma is not only the separation of the dura mater layer from the skull but also includes a decrease in intracranial pressure, high blood pressure, or rapid correction of hypotension. In concordance with our study, the delayed presentation of symptoms is not a rarity at all according to a research study done in.Nigeria[16].

It was emphasized in the study done by Bhau, K.S. that locations other than the temporal area, GCS >12, and small size 10 ml are the requirements for conservative management. During the course of conservative management, 22 patients out of 89 required surgical treatment due to neurodeterioration, increase in hematoma size on CT, bradycardia, hemiparesis, pupillary abnormalities, delay in referral, and only 18% had poor outcomes.[17]

In a different study, out of 160 patients, 37 (23%) experienced EDH enlargement while receiving conservative care.[18]The average enlargement was 7 mm, and the average enlargement time was 5.3 hours after the CT diagnosis and 8 hours after the injury. In each case, the EDH enlarged within 36 hours of the injury. EDH enlargement is common but occurs early. It is best to repeat CT imaging within 36 hours of injury.[18,19,20]

Patients should have regular CT scans, and strict watch should be kept for any decline in clinical condition. It's important to keep in mind the various factors listed above. The benefits of early diagnosis and immediate surgical intervention were demonstrated by the excellent result that followed. According to the findings of our study, surgical intervention was used to treat 68.8% of cases, with a 90.6% success rate. Mortality occurred in just 3% of patients. These three individuals suffered severe head injuries. The extradural (or epidural) hematoma (EDH) is one of the deadliest of the major injuries brought on by traumatic brain injury (TBI). Extradural hemorrhages caused by trauma have been known about for more than 140 years. EDH had an 86% mortality rate 100 years ago, and traumatic EDH is still a true neurosurgical emergency. [21,22,23,24] In many centers, mortality has now decreased to below 20% from around 80% in the late nineteenth and early twentieth centuries. The main factors causing a decrease in mortality are improving the standard of care, continuously evaluating outcomes, and factors affecting outcomes. [25]

Conclusion:

There were total 32 patients who presented in emergency of DHQ teaching Hospital Rawalpindi in neuro surgery department with extra dural hematoma.

All the patients who presented with RTA especially bike rider were without helmet and the patients who received severe head injury and were delayed in presentation had poor prognosis

3 of them expired who presented with severe head injury and two of them were delayed in presentation as well

Those patients who received mild and moderate head injuries and presented early had good prognosis and discharged without any morbidity.

We have already started a campaign regarding awareness of wearing helmets during bike riding and we can reduce the number of cases by promoting those kinds of activities.

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Symptomology and Complications of Dengue Hemorrhagic fever in children less than five years of age – A tertiary Care experience from Rawalpindi

Aqeela Jabeen[1], Wajiha Arshad[2],Noor Ul Sabah[3],Muhammad Haider[4],Uzma Hayat[5]

[1]Department of Pediatric Medicine, Holy Family Hospital, Rawalpindi
[3]Department Of Pediatric Surgery, Holy Family Hospital, Rawalpindi
[5]Incharge Research and department, Rawalpindi Medical University
[2]Surgical Unit 2, Holy Family Hospital, Rawalpindi
[4]Consultant Orthopedics, Department of orthopedics, Holy Family Hospital, Rawalpindi

Author's Contribution

[1]*Conception of study*
[2]*Experimentation/Studyconduction*
[1,3]*Analysis/Interpretation/Discussion*
[1,2,4]*Manuscript Writing*
[4,5] *Critical Review*
[5,6] *Facilitation and Material analysis*

Corresponding Author

Noor Ul Sabah Butt
Post graduate trainee, Department of Pediatric Surgery, Holy Family Hospital, Rawalpindi
Email: dr.noor2712@gmail.com

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Abstract

Introduction:
Clinical presentation of dengue varies from being asymptomatic, with mild fever to severe form comprising of hemorrhage and plasma leakage leaking to shock. This varied symptomatology poses a challenge to the pediatrician in diagnosis, particularly differentiating from the pool of etiology of pyrexia in children. The aim of this study is to identify complication and morbidity status of dengue hemorrhagic fever in children less than five years of age.

Materials and Methods:
This statistical report includes of data of 35 patients who presented to the Pediatrics Department of Holy Family Hospital, Rawalpindi. The data was collected between September and November 2021. In this statistical analysis, records of patients admitted to the Holy Family Hospital, Rawalpindi, from September 1, 2016, till November 30, 2019, diagnosed with dengue hemorrhagic fever were recruited.

Results:
A total of 35 patients included in this report with a mean ± standard deviation of 33.29 ± 15.45 months. Additionally, most of the patients were male 19 (54.3%) with a similar proportion of having medium and high socio-economic status (12 (34.3%), respectively .The most commonly associated symptom was body aches.

Conclusions:
Children with dengue hemorrhagic fever are at risk of developing complications which can increase the morbidity as well as mortality. A special consideration should be given to clinical presentation. Additionally, strict monitoring and early diagnosis is significant for a good prognosis and reduces the risk of worsening symptoms and complications

Introduction:

Dengue is a viral infection which initially spread throughout the tropical world, over the past 60 years, and affects over half the world's population now. [1] It is a global public health issue to attempt to control this infection and its early detection. [2]

Dengue viruses (DENV) are in the Flaviviridae family [3] and it has five known serotypes, DENV-1, DENV-2, DENV-3, DENV-4 and DENV-5, all transmitted by the Aedes aegypti mosquitoes. [4] They may cause classic dengue fever (DF), dengue hemorrhagic fever (DHF), or dengue shock syndrome (DSS) and are the leading cause of pediatric age group mortalities in some countries. [5]

Dengue infection is a systemic and dynamic disease, having a wide clinical spectrum that includes both non-severe and severe clinical manifestations. After the incubation period, the symptoms of illness manifest abruptly and has three phases -- febrile, critical and recovery. [6] Symptoms usually arise after an incubation period of 4–10 days after the bite from an infected mosquito, and these symptoms may last for 3-7days. [6]

Dengue fever is a re-emerging viral disease, most commonly occurring in tropical and subtropical regions. DF presents with an abrupt onset febrile illness that is characterized by headache, retro-orbital pain, severe muscle and joint pains, and rash that typically lasts for 7–14 days. [3] The clinical features and laboratory investigations of dengue infection are similar to those of other febrile illnesses; hence, its accurate and timely diagnosis is difficult, leading to delay in start of appropriate treatment measures. [7] Severe dengue fever may lead to rapid death, if not properly treated, particularly in children. [8]

Due to the immature hemodynamic systems, children and especially infants, are prone to develop severe dengue disease. National surveillance data from Asian countries shows that infants under 1 year of age and children aged 4–9 years have been at the highest risk for severe dengue disease consistently. [9]

Clinical presentation of dengue varies from being asymptomatic, with mild fever to severe form comprising of haemorrhage and plasma leakage leaking to shock. This varied symptomatology poses a challenge to the paediatrician in diagnosis, particularly differentiating from the pool of etiology of pyrexia in children. [10]

The aim of this study is to identify complication and morbidity status of dengue hemorrhagic fever in children less than five years of age.

Material and methods:

This statistical report includes of data of 35 patients who presented to the Pediatrics Department of Holy Family Hospital, Rawalpindi. The data was collected between September and November 2021. In this statistical analysis, records of patients admitted to the Holy Family Hospital, Rawalpindi, from September 1, 2016, till November 30, 2019, diagnosed with dengue hemorrhagic fever were recruited. Their demographic, clinical, and biochemical records were assessed. Patients were enrolled in this report after obtaining an informed written consent. Demographic including (age, sex, weight, height, pulse rate and socio-economic status), complications (Ascites, Bleeding, Shock and Lethargy and

symptoms related data (fever, Body Aches, vomiting, Abdominal Pain) were recorded for all the patients.

Statistical Analysis:

Data was entered and analyzed using SPSS software (version 25.0; SPSS, Chicago, IL, USA). Quantitative variables were calculated by mean and standard deviation. Qualitative variables were reported as frequency and percentage.

Results:

A total of 35 patients included in this report with a mean ± standard deviation of 33.29 ± 15.45 months. Additionally, most of the patients were male 19 (54.3%) with a similar proportion of having medium and high socio-economic status (12 (34.3%), respectively. In addition, mean height, weight and pulse rate were also calculated as shown in Table 1.

Table 1: Demographic characteristics of patients presenting with DHF (N=35).

Variables	Categories	N = 35
Age (months)	Mean ± SD	33.29 ± 15.45
	Median (min-max)	32 (5-59)
Sex	Male	19 (54.3%)
	Female	16 (45.7%)
Socio-economic status	Low	11 (31.4%)
	Medium	12 (34.3%)
	High	12 (34.3%)
Weight (kg)	Mean ± SD	17.46 ± 8.31
	Median (min-max)	19 (3-32)
Height (cm)	Mean ± SD	84.31 ± 18.34
	Median (min-max)	90 (46.50-109)
Pulse rate (minutes)	Mean ± SD	100.80 ± 9.01
	Median (min-max)	100 (85-118)

Table 2 presented the complications of patients presenting with DHF and the most prevalent complication was Ascites 18 (51.4%).

Furthermore, Table 3 described Symptoms of patients presenting with Dengue Hemorrhagic Fever. Moreover, the most commonly reported symptom was Body Aches 31 (88.6 %).

Table 2: Complications of patients presenting with DHF in Holy Family Hospital (N=35).

Variables	Categories	N (%)
Lethargy	No	24 (68.6)
	Yes	11 (31.4)
Ascites	No	17 (48.6)
	Yes	18 (51.4)
Bleeding	No	31 (88.6)
	Yes	4 (11.4)
Shock	No	31 (88.6)
	Yes	4 (11.4)

Table 3: Symptoms of patients presenting with Dengue Hemorrhagic Fever in Holy Family Hospital (N=35).

Variables	Categories	N (%)
Vomiting	No	9 (25.7)
	Yes	26 (74.3)
Abdominal Pain	No	13 (37.1)
	Yes	22 (62.9)
Body Aches	No	4 (11.4)
	Yes	31 (88.6)
Fever	Mean ± SD	100.62 ± 0.98
	Median (min-max)	100.40 (99-103)
No. of vomiting (last 24 hours)	Mean ± SD	2.91 ± 1.50
	Median (min-max)	3 (1-6)

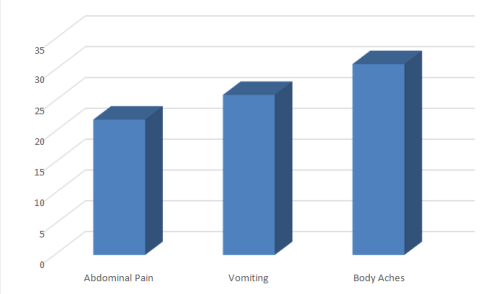

Figure 1: Symptoms of patients presenting with DHF in Holy Family Hospital

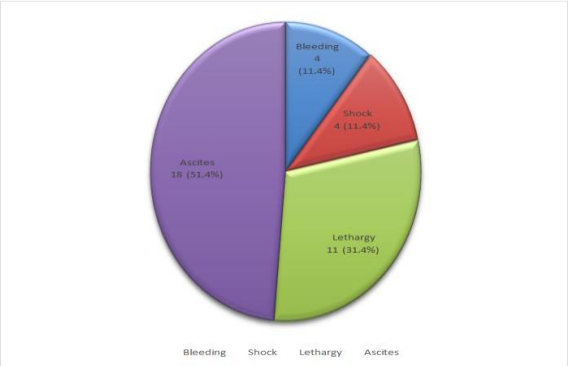

Figure 2: Complications of patients presenting with DHF in Holy Family Hospital

Discussion:

Dengue is widespread throughout the tropics, with local variations in risk influenced by climate parameters as well as social and environmental factors. It has become a major international problem in public health in recent years. The World Health Organization (WHO) has estimated that around 2.5–3 billion people are presently living in dengue transmitted zones. [11] Dengue fever causes a high burden of disease and mortality across tropical and subtropical regions including Southeast Asia, Africa, the Western Pacific, and the Americas. [12]

Clinically, the manifestations of DENV infection can range from mild-acute undifferentiated febrile illness to classical dengue fever (DF), dengue hemorrhagic fever (DHF), and dengue shock syndrome (DSS), according to the WHO (1997) dengue guidelines. [11]

Despite being mainly an arthropod-borne virus, other routes of transmission including blood transfusions, organ donation, needle-stick-related, and vertical transmission (mother-to-infant) have also been reported. [13] Studies have demonstrated that the presence of cross-reactive antibodies against different DENV serotypes predisposes to a more enhanced illness and contributes to the development of DHF and DSS. [14] Children with passive immunity from immunized mothers tend to present with DHF after their first DENV infection. [15] [16]

Plasma leakages is the major pathophysiological hallmark that distinguishes DHF from DF. Severe plasma leakage may result in hypovolemic shock. Various factors are thought to impact disease presentation and severity. Virus virulence, pre-existing dengue antibodies, immune dysregulation, lipid change and host genetic susceptibility are factors reported to be correlated with the development of DHF. However, the exact reasons and mechanisms which trigger DHF still remains controversial. [11] DHF has four major clinical manifestations: severe fever, hemorrhage,
with hepatomegaly and circulatory failure. [17]

Hemorrhage in dengue patients may be caused by multiple phenomena, such as thrombocytopenia (abnormal low levels of platelets), coagulopathy (impaired
coagulation), and disruption in the epithelial cell lining of vessels as well as disseminated intravascular coagulation (DIC) [11]

The first known epidemic of DHF occurred in Manila, Philippines, in 1953 to 1954, but within 20 years the disease had spread throughout Southeast Asia; by the mid-1970s, DHF had become a leading cause of hospitalization and death among children in the region [5] Dengue virus was first isolated in Pakistan during a sero-epidemiological study for encephalitis. However, the first dengue fever outbreak in Pakistan was reported in the years 1994-95, followed by another epidemic in year 2006 in Karachi. [18] prior to 2006, dengue was not commonly

seen across Pakistan. It was only restricted to the Karachi area. However, from 2006-2017, due to the travel of people infected with dengue virus to areas without dengue and presence of vector mosquitoes in these regions, there has been an outbreak of dengue in all provinces at different times and it is now endemic in the whole country. [19]

In our study, a total of 35 patients were included with mean age of 33.29 ± 15.45 months. There is male predominance by 54.3% and has been backed up by literature as Saraswathy et al, Dhobale et al and Faridi et al reported male preponderance in their respective studies. [20] [21] [22]

Children with dengue may have varying clinical presentations throughout the world. But fever is the most common symptom in dengue irrespective of types and severity. [23] Aggarwal et al conducted a study which demonstrated that common symptoms were fever, vomiting and abdominal pain as reported in studies done by Kabra et al, Srivastava et al and Cherian et al. [24] [25] [26] [27] A study was conducted by Ranawaka et al which demonstrated that the most common symptoms in the prodromal phase were vomiting (67.9%), abdominal pain (65.7%), and headache (60.9%). [28] Our study revealed a similar result, with 88.6 % of the children suffering from body aches, 74.3% with vomiting and 62.9% with abdominal pain. The mean temperature of these patients was 100.62 ± 0.98 ºF.

Haemorrhage is a fatal complication of severe dengue, and may affect skin and subcutaneous tissues, mucosa of the GI tract; Internal bleeding in heart and liver are often seen clinically, while intracranial and subarachnoid bleed are less common. GI bleeding may be severe, necessitating prompt attention. A serous effusion with comparatively higher protein content may be seen in the body cavities. [29] It has also been reported in various literatures that the high morbidity and mortality in DF/DHF is due to multiorgan involvement. Most commonly involved organs are liver, kidney, heart, lungs and brain. [30]

A study was conducted by Faridi et al in which all patients presented with fever and hepatomegaly. Physical examination also revealed splenomegaly in 11 (32.4%), ascites in 6 (17.6%) and pleural effusion in 3 (8.8%). The common bleeding manifestations were positive tourniquet test in 22 (64.7%) and epistaxis in eight (23.5%). It also revealed that hemorrhagic manifestations were not related to platelet count. [22] Another clinical study was carried out by Srivastava et al, and their results show that haemorrhagic manifestations were present in 41.7% of all the cases. Out of these, 90% had gastrointestinal haemorrhages, and shock occurred in 17 cases (70.8%). [26]

In a study by Dhobale et al, it shows that the common complications were pleural effusion (41%) and ascites (42%). [21] All this literature strengthens our study result which shows that the most common complications encountered by our patients were ascites 51.4% followed by lethargy 31.4%, shock 11.4% and bleeding 11.4%.

Ultrasonography is a safe, low-cost imaging modality that does not utilize ionizing radiation, with high sensitivity to detect early signs of plasma leakage. Particularly pleural effusion may be early identified, up to two days before defervescence, preceding changes in hematocrit levels. Sonographic findings express the increase in capillary permeability (a sign of plasma leakage) and

include cavitary effusion (ascites, pleural and pericardial effusion), and gallbladder wall thickening present in one third of patients affected by the mild presentation, and in 95% of the cases with the severe presentation of DHF. [30]

Conclusion:

Children with dengue hemorrhagic fever are at risk of developing complications which can increase the morbidity as well as mortality. A special consideration should be given to clinical presentation. Additionally, strict monitoring and early diagnosis is significant for a good prognosis and reduces the risk of worsening symptoms and complications.

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Incidence of Deviated Nasal Septum In Patients Presented In Outpatient Department

Muhammad Sibtain Raza[1] , Maria Naseer Malik[2] , Noor Ul Sabah Butt[3] , Muhammad Haider [4] ,Ahmed Hassan Ashfaq[1] , Muhammad Umar[5] ,Uzma Hayat[6]

[1]Department of ENT Benazir Bhutto Hospital, Rawalpindi
[2]Department of Surgery (Unit II), Holy Family Hospital, Rawalpindi
[5] Vice Chancellor, Rawalpindi Medical University
[3]Department of Pediatric Surgery, Holy Family Hospital, Rawalpindi
[4] Consultant orthopedics, Department of orthopedics, Rawalpindi Medical University, Rawalpindi, Pakistan.
[6] Incharge Research and department, Rawalpindi Medical University

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Author's Contribution

1 Conception of study
2,4 Experimentation/Study conduction
1,3 Analysis/Interpretation/Discussion
1,2,4 Manuscript Writing
2,4,5 Critical Review
3,5,6 Facilitation and Material analysis

Corresponding Author

Noor Ul Sabah Butt,
Post graduate resident, Department of Pediatric surgery,
Holy family hospital,
Rawalpindi

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Abstract

Background: Deviated nasal septum is the common condition in the outpatient department of ENT surgery. Patients report different signs and symptoms, and with severe disease complications septoplasty is required.

Objectives: To find out the incidence of the deviated nasal septum in the patients presenting to the outpatient department of ENT.

Materials and Methods: This is the descriptive cross-sectional study carried out in ENT department of tertiary care hospital Rawalpindi from 28th August 2021 to 28th October 2021 after approval from institutional ethical committee. A sample size of 30 patients was included in the study by non-probability convenience sampling. Patients from both gender and all ages, presenting in outpatient department were under the inclusion criterion. Emergency cases and those having previous history of septoplasty were excluded from the study. Data collection done by post graduate residents of otorhinolaryngology department using self-made Performa and analyzed by using IBM SPSS statistics version 26. Descriptive analysis has been done to find out the measures of central tendency and dispersion.

Results: The mean age of patients reported in OPD was 22±6.414 year. 70% (n= 21) of the patients were male and 30% (n= 09) were female. All the patients presented with symptoms pertaining to DNS diagnosed with the condition. 70%(n= 21) patients represented poor socioeconomic status whereas 30% (n= 09) had background of middle class. 60% (n= 18) of the patients presented with nasal obstruction associated with headache and sleep disturbance; 26.7% (n= 08) reported nasal obstruction associated with anosmia, headache and sleep disturbance; and 13.3 % (n= 04) had complaints of nasal bleed in addition to other symptoms.

Conclusion: A high incidence of the condition was reported in our setting and mostly patients presented with complications, needed surgical treatment. Key words: Deviated Nasal Septum, Septoplasty

Introduction:

Deviated nasal septum is the condition that is characterized by ununiformed division of nasal cavity due to displacement of nasal septum from midline more towards one side[1] . Deviated nasal septum is a very common finding in otorhinolaryngology clinic presenting in up to 62% of the population[2] . Almost all deformities of the septum were caused by developmental disturbances, trauma or impaired growth after trauma[3] . In infant birth trauma results in deviation if not congenital, whereas in adult accidental injuries such as contact sports, automobile injuries, wrestling result in trauma to nose[1] . This condition can be asymptomatic, or it causes different types of symptoms such as nasal blockage and congestion, headache, difficulty breathing, anosmia, frequent epistaxis, recurrent sinusitis, sleep disturbance and middle ear infection. Deviation may involve only the cartilage, bone or both bone and cartilage. It can present as anterior dislocation, C shaped deformity, S shaped deformity, spur and thickening[4] .Weather or not a deformity serves surgical attention depends upon its impact on function and cosmetics[3] . The proper management of this condition requires a thorough preoperative or intraoperative analysis of the anatomical components of the nasal skeleton, and the surgical maneuvers should be executed in a precise manner[5]. As increased number of cases have been reported in otorhinolaryngology outpatient department with this condition that severely affected the quality of life due to rhinologic symptoms, we aimed this study to find out the incidence of the condition, common presentations and complications of the condition that draw attention for surgical treatment i.e., Septoplasty.

Material and methods:

This is the descriptive cross-sectional study carried out in ENT department of tertiary care hospital Rawalpindi from 28th August 2021 to 28th October 2021 after approval from institutional ethical committee. Patients of all ages and from both genders, presented in the OPD of ENT department were included in the study. A sample size of 30 patients was taken. Emergency cases and cases with re-deviated nasal septum after septoplasty were excluded from the study. Data collected by the post graduate resident team using the self-made proforma which includes demographic variables e.g. name, age, gender, address, socioeconomic status and disease related variables e.g., sign and symptoms, duration of symptoms, any treatment taken and complications of disease. Data has been analyzed by using IBM SPSS statistics version 26. Descriptive analysis has been done to find out the measures of central tendency and dispersion. Chi-square test was applied for statistical analysis and a p value < 0.05 was considered to indicate statistical significance. Results were shown in different types of charts and frequency tables.

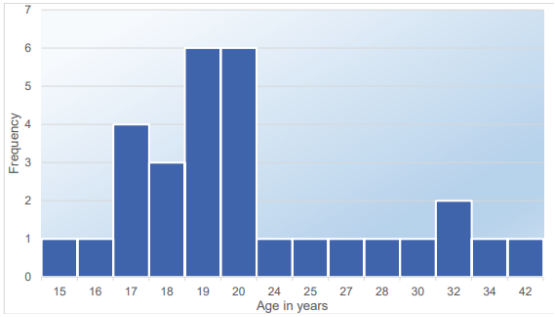
Results:

Total number of patients included in the study was 30 according to the inclusion criteria within the specified duration of the study. The mean age of patients was 22.± 6.414 years. The range was 27(15-42) with minimum and maximum age of presentation was 15 and 42 years respectively. However maximum number of the patients presented at the age of 19 and 20 years with equal frequency (Table-1).

Measures of central tendency	Values
Mean	22.03
Median	19.50
Mode	19[a]
Standard deviation	6.414
Variance	41.137
Range	27
Minimum	15
Maximum	42

Table-1: Age

a: multiple mode exists, minimum value added



All the patients presented with symptoms pertaining to deviated nasal septum were diagnosed with the condition. Among them 70% (n= 21) were male and 30% (n= 09) were female (Table-3).

Gender	Frequency	Percent	Valid percent	Cumulative percent
Female	09	30	30	30
Male	21	70	70	100
Total	30	100	100	

Table -3: Gender frequency and percentage

Socioeconomic status was classified as lower and middle class. 70% (n= 21) of the patients represented lower socioeconomic status whereas 30% (n= 09) had background of middle class (Table-4).

Socioeconomic status	Frequency	Percent	Valid percent	Cumulative percent
Middle class	09	30	30	30
Lower class	21	70	70	100
Total	30	100	100	

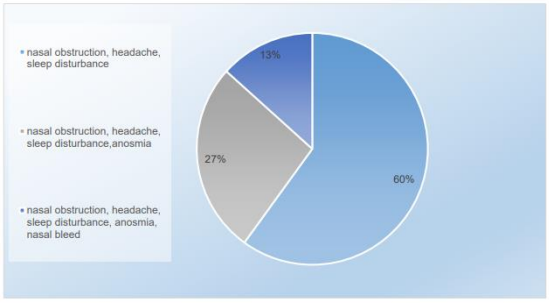
Table -4: socioeconomic status frequency and percentage

Each presenting symptom of the disease was analyzed which showed 60% (n= 18) of the patients with nasal obstruction associated with headache and sleep disturbance; 26.7% (n= 08) with nasal obstruction associated with anosmia, headache and sleep disturbance; and 4% (n= 04) had complaints of nasal bleed in addition to nasal obstruction, anosmia, headache and sleep disturbance. These results revealed that majority had common symptoms of nasal blockage headache, and sleep disturbances as compared to anosmia and epistaxis. (Table5)

Disease related variable:

Symptoms	Frequency	Percent	Valid percent	Cumulative percent
Nasal obstruction, headache, sleep disturbance	18	60.0	60.0	60.0
Nasal obstruction, headache, sleep disturbance anosmia	08	26.7	26.7	86.7
Nasal obstruction, headache, sleep disturbance, anosmia, nasal bleed	04	13.3	13.3	100.0

Table-5: Presenting symptoms with frequency and percentage.



Moreover 70% (n= 21) of the patients refused for any type of treatment taken previously whereas 30% (n= 09) patients had received medication for the relief of symptoms. Among the subject, duration of symptom was described by the patients as follows with average duration of presentation is 4 years (Table-6).

Duration of symptoms	Frequency	Percent	Valid percent	Cumulative percent
1 year	5	16.7	16.7	16.7
2 years	1	3.3	3.3	20.0
3 years	6	20.0	20.0	40.0
4 years	8	26.7	26.7	66.7
5 years	5	16.7	16.7	83.3
6 years	4	13.3	13.3	96.7
7 years	1	3.3	3.3	100.0
Total	30	100.0	100.0	

Table-6: Duration of symptoms, frequency and percentage

Patients had different type of nasal septum deviation and results obtained are described below in Table-7

Type of nasal septum deviation	Frequency	Percent	Valid percent	Cumulative percent
Anterior dislocation	12	40.0	40.0	40.0
C shaped	8	26.7	26.7	66.7
S shaped	6	20.0	20.0	86.7
Spur	4	13.3	13.3	100.0
Total	30	100.0	100.0	

Table-7: Type of nasal septum deviation, frequency and percentage

Reported complications of the condition were sleep apnea, dry mouth, pressure feeling and middle ear infection in 40% (n= 12) of the patients; dry mouth, sleep apnea and headache in 26.7 % (n= 08); feeling of pressure and recurrent sinusitis in 20.0% (n= 06); depression, headache, and recurrent sinusitis was found in 13.3 % (n= 04) (Table-8).

Complications of the disease	Frequency	Percent	Valid percent	Cumulative percent
sleep apnea, dry mouth, pressure feeling, middle ear infection	12	40.0	40.0	40.0
dry mouth, sleep apnea, headache	08	26.7	26.7	66.7
Pressure feeling, recurrent sinusitis	06	20.0	20.0	86.7
depression, headache, recurrent sinusitis	04	13.3	13.3	100
Total	30	100.0	100.0	

Table-8: Complications of the disease, frequency, and percentage

Discussion:

Although the exact incidence of deviated nasal septum is variable among the studies, it is well known that it is a very common condition either incidental finding without any related symptom or as symptomatic[6]. Gray found it to be 80% in adults and 30% in children[7]. Van der Veken et al revealed via their study that incidence of deviated nasal septum is up to 70% with increasing incidence with age[8]. DNS can present in any age and gender. In infants cause of presentation is congenital or birth trauma while in adults the most common acquired cause is automobile accidents and contact support injuries and this could be the reason of higher male incidence. Our study included the patients of all age, but the mean age of presentation as described in results was 22 years with minimum age of 15 year however maximum number of the patients presented at the age of 19 and 20 years and male predominance, this is supported by study of Ozkurt et al who found it to be 65% with relatively male predominance[9]. One important aspect needs to be highlighted here that in our study 70% of the patients who presented with the condition and its complication were those having poor socioeconomic status. There are so many contributing factors in this regard such as lack of facilities such as education and awareness of condition and measures that could be taken, distant health care centers, lower economic status. Patients who remained untreated develop complications that affect their quality of life and resulted in later severe presentation. It has been found that all patients presented in OPD with a combination of different symptoms such as nasal blockage or congestion, headache, anosmia, frequent epistaxis, recurrent sinusitis, sleep disturbance and middle ear infection. Different type of nasal septum deviation had been reported and most of them were requiring septoplasty. Most common presentation (60%) in our setting was nasal obstruction and congestion associated with headache and sleep disturbance. Fidan et al. asserted that nasal obstruction aggravates a decrease in QOL 40% 27% 20% 13% sleep apnea, dry mouth, pressure feeling, middle ear infection dry mouth, sleep apnea, headache Pressure feeling, recurrent sinusitis depression, headache, recurrent sinusitis and an impairment in sleep quality[10]. Patients with complaints of anosmia and nasal bleed were also reported. The average duration of symptoms was found to be 4 years. Interestingly only 30% of the participants had taken medication for the relief of symptoms while majority (70%) refused any kind treatment taken before for the condition.

Apart from the rhinological symptoms non rhinological symptoms include facial pain, anxiety, depression, snoring, lack of interest in work, irritation. Majority of the participants of the study showed complications of the disease as sleep apnea, dry mouth, pressure feeling and middle ear infection. Interestingly 26.7 % also showed the symptoms of depression along with recurrent sinusitis. This fact is supported by the study done by Lee at el younger patients with NSD showed an increased risk of depression, anxiety, and migraine compared to older people[11]. The findings of this study indicated that higher incidence of disease with male predominance and common in people of lower socioeconomic status. Majority had presentation with complications of the disease requiring surgical treatment for improvement in quality of life.

Conclusion

A high incidence of the nasal septum deviation was reported in ENT OPD, with male predominance and most of the patients presented with those complications that had already affected their quality of life. Patients with severe symptomatic disease required surgical treatment. The debate of septoplasty procedure among all symptomatic patients having poor quality of life due to rhinologic symptoms as well as complications of the disease has more scope in clinical setting so it should be given importance in daily practice.

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Factors Predicting The Outcome of Intracerebral Hemorrhage Patients Presenting To A Tertiary Care Hospital In Rawalpindi.

Sanabil anwar[1], Muhammad Mohtasim Shah[2], Maryam mansoor[3],Nadeem Akhtar[4] ,Lubna Meraj[5]

, Omer fraz[6],Uzma Hayat[7]

[1]Post graduate resident, Department of medicine, District headquarter hospital, Rawalpindi
[3]Final year medical student, Rawalpindi medical University
[5]Head of Department, Department of medicine, Benazir Bhutto Hospital, Rawalpindi
[7]Incharge Research and Department, Rawalpindi Medical University

[2]Post graduate Resident, Department of Neurosurgery, District Headquarter Hospital, Rawalpindi
[4]Head of Department, Department of Neurosurgery, District Headquarter Hospital, Rawalpindi.
[6]Assistant professor, Department of pediatric surgery, Holy Family hospital

Author's Contributions

[1] Conception of study
[2,4] Experimentation/Study conduction
[3]Analysis/Interpretation/Discussion
[1,3] Manuscript Writing
[2,7] Critical Review
[3,,5,6] Facilitation and Material

Corresponding Author

Muhammad mohtasim Shah,
Post graduate resident, Department of neurosurgery,
District headquarters hospital, Rawalpindi

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Abstract

Objective

It is aimed to assess the demographic details of the patients and the effects of various factors on the outcome of patients managed in the emergency Department of DHQ Rawalpindi

Materials and methods

This retrospective descriptive study was conducted over duration of 1 month at DHQ Hospital Rawalpindi. Ethical approval was obtained from the institutional review board & informed consent from patient's kin was acquired. 36 patients of Hemorrhagic stroke admitted via the ED were included by convenience sampling technique

Results

Out of 36 patients of intracerebral hemorrhage, it was seen that mean age was 58 years with a standard deviation of 13.3. Among them 80.56% were males and 19.44% were females. Majority of them about 58.33% were residents of Rawalpindi and rest 41.67% belonged from outside Rawalpindi. All of the participants had their systolic BP, diastolic BP and GCS checked; it was also seen that on presentation 41% of patients had aspirated. Moreover it was observed that smokers were at highest risk of intraventricular extension followed by naswar addicts and nonsmokers that were equally threatened. Among 36 patients only 9 had intraventricular extension, out of which 7 were smokers, 1 was nonsmoker and 1 was a naswar addict.

Conclusion

Smokers in general are at increased risk of worse outcome compared to their non-smoker counterparts due to multiple pathological processes caused by use of tobacco

Introduction:

A stroke is a medical condition in which inadequate blood flow to brain causes cell death. It is of two main types, Ischemic & Hemorrhagic. Ischemic stroke is the predominant type accounting for 87% of all cases. Hemorrhagic stroke while being less prevalent carries a worse prognosis with fatality frequently encountered in the acute phase. The pathophysiology of Intracerebral hemorrhage (ICH) is widely studied & usually attributed to rupture of small penetrating arteries secondary to hypertensive changes or other vascular abnormalities [1,2]. In developed countries, its incidence has decreased with better blood pressure regulation. l ['°]. However, in developing countries, ICH continues to be a clinical challenge with no change in its disease burden['1. The outcome of ICH while usually morbid, is variable. Its clinical course is dictated by multitude of factors including hematoma volume, location & involvement of ventricles. ['1. The higher mortality and severe disability in contrast to ischemic stroke merits it an entity wanton of clinical deliberation. [°]. The patient cohorts outcome is notably subject to institution of timely & appropriate intervention & more importantly, to patient education about preceding danger signs. It is thus pressing that patients at risk of ICH are identified & sensitized by establishment of proper screening criterias & infomedia.

In this study it is aimed to assess the demographic details of the patients and the effects of various factors on the outcome of patients managed in the emergency Department of DHQ Rawalpindi. The factors included are age, presence of high systolic blood pressure, smoking, presenting GCS, interventricular extension and aspiration. Hence, we hope to add to the better understanding of the natural course of the disease as well as to further clearly delineate the at risk population.

Material and methods:

This retrospective descriptive study was conducted over duration of 1 month at DHQ Hospital Rawalpindi. Ethical approval was obtained from the institutional review board & informed consent from patient's kin was acquired. 36 patients of Hemorrhagic stroke admitted via the ED were included by convenience sampling technique. Inclusion criteria was Age between 20 -85 years & CT diagnosed case of Hemorrhagic Stroke. Exclusion Criteria included Patients with prior history/Dx of Stroke/CVA, Patients with Hemorrhagic Transformation of Ischemic Stroke & Patients on anticoagulation or thrombolytic therapy.

A specialized Performa was used for data collection. Data was obtained from maintained registers of the emergency department of DHQ HOSPITAL, RAWALPINDI. It included, age, gender, smoking status, systolic blood pressure, .The data was analyzed on SPSS version 25 and presented in tabulated, pie graphs, and bar charts form. Quantitative variables were assessed as mean & standard deviation. Categorical as frequencies & percentage. Tests of significance were the students T-test for the former & the chi square test for the latter. P-value less than 0.05 was taken as significant.

Results:

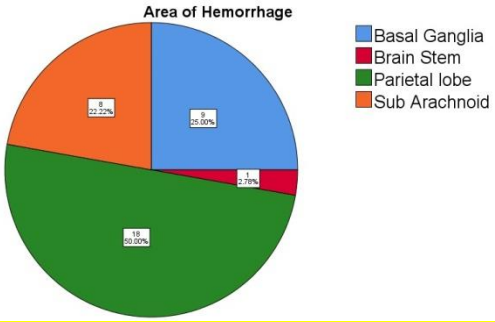
Out of 36 patients of intracerebral hemorrhage, it was seen that mean age was

58 years with a standard deviation of 13.3. Among them 80.56% were males and 19.44% were females. Majority of them about 58.33% were residents of Rawalpindi and rest 41.67% belonged from outside Rawalpindi. All of the participants had their systolic BP, diastolic BP and GCS checked; it was also seen that on presentation 41% of patients had aspirated.

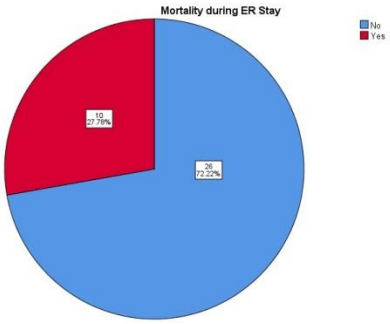
Statistics

	Age	Presenting Systolic BP	Presenting Diastolic BP	MAP on Presentation	Presenting GCS
Mean	58.83	176.94	107.22	130.46	11.22
Median	60.00	175.00	110.00	130.00	11.00
Std. Deviation	13.341	27.961	11.113	15.799	2.331

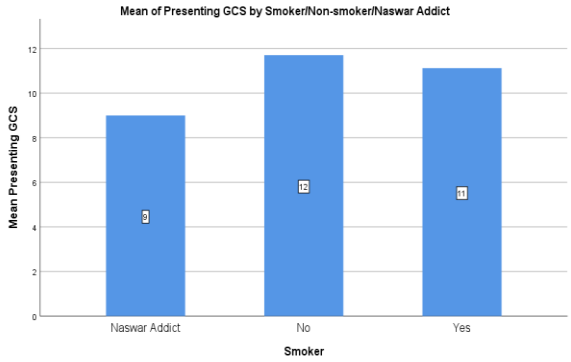
Main areas of hemorrhage in ICH included basal ganglia, brainstem, parietal lobe and Sub-Arachnoid region. Parietal lobe stroke was the most common stroke identified on CT (50%).



While 25% of all these strokes had intraventricular extension. ICH being a life-threatening emergency resulted in death of 10 patients (27.8%) from a total of 36 during their ER stay. After doing correlation of different variables with outcomes of ICH. It was observed that risk of intraventricular extension and mortality during ER stay significantly increases after 60 years of age. Just like that the patients who had low GCS scores especially below 11 had high mortality during ER stay.

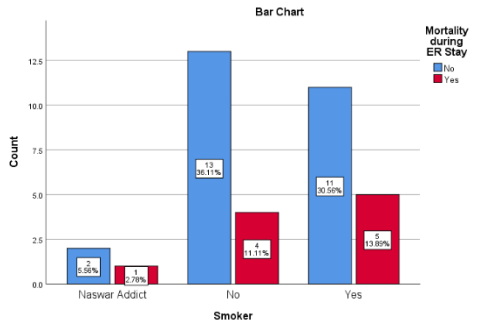


Furthermore Patients who presented with low GCS scores were either the ones who had aspiration on presentation or the ones who were naswar addicts and smokers, both of them had GCS around 9 and 11 respectively. Whereas nonsmokers had a comparatively better GCS score which was about 12.



Moreover it was observed that smokers were at highest risk of intraventricular extension followed by naswar addicts and nonsmokers that were equally threatened. Among 36 patients only 9 had intraventricular extension, out of which 7 were smokers, 1 was nonsmoker and 1 was a naswar addict.

Not only did the smokers have a high risk of IVE but were also at increased danger of death, as 13.89% of all the mortality during ER was of smokers followed by 11.11% and 2.78% deaths were of the nonsmokers and naswar addicts respectively.



Overall the results showed that majority of the patients who presented with ICH were older males living in Rawalpindi. And the factors that contributed in high mortality rate were age above 60, smokers, low GCS score, high systolic blood pressure, intraventricular extension and with aspiration.

Discussion:

Intracerebral hemorrhage is a catastrophic condition in which a hematoma is forms in the brain & this subsequently results in stroke. Although prevalence of hemorrhagic stroke is less than its subtype, it results in most of the morbidity & mortality. (https://www.ncbi.nlm.nih.gov/books/NBK553103/) The health burden of ICH is massive with 33 million affected worldwide in 2010. These patients require intensive post-op care & recovery is often delayed which further compounds the economic cost of the condition. Moreover, the incidence in Lower & middle income countries is double than those of more developed ones. World Health Organization (WHO) estimates that by 2030, 80% of all stroke will occur in people living in low and middle income countries (LMICs). A factor especially of strain & concern given the incumbently deficient infrastructure & limited access to healthcare in these localities.

The causes of ICH are multiple and widely divided into primary & secondary. The former is caused by chronic hypertension & amyloid angiopathy. These are 85% of the total & amenable to adequate screening & health education. Secondarily it is caused by hematological disorders, vascular malformations, neoplasms, hemorrhagic conversion of ischemic strokes and drug abuse. These are mostly undetected prior to deterioration & found in a younger age group. In our cohort The mean systolic blood pressure noted was 176/106 which falls into hypertension stage 2, the systolic borderline on hypertensive crisis. (https://www.heart.org/en/health-topics/high-blood-pressure/understanding-blood-pressure-readings).

A gender predilection is present with most cases seen in males and age pre-disposition to >55 years of age. Both these figures are mirrored by our study as males comprised 80% of the subset & the mean age was 58 plus minus 13. Being male is accepted as non-modifiable factor in the natural history of the disease & explained by Increased incidence of both hypertension & substance abuse in the gender in general.

Hypertensive bleeds mainly affect the pons, basal ganglia, thalamus & posterior fossa. Contrary to this the most common area involved in our study was the Parietal lobe with 50% incidence seen. This can perhaps be attributed to amyloid angiopathy which characteristically causes lobar haemorrhages in older patients.

GCS of the patient is a decisive factor dictating the outcome greatly with a score <9 a predictor of worse outcome. (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7545850/) The cause is two fold, firstly the location with Bleeds in the basal ganglia & brainstem impairing GCS at most & causing immediate death at worst. Secondly,

inappropriate care of the impaired patient can impact the condition drastically. We observed aspiration in 41% of our patients and also found that mortality was linked to having a GCS score below 9 & aspiration.

Smokers in general are at increased risk of worse outcome compared to their non-smoker counterparts due to multiple pathological processes caused by use of tobacco. Pan et al in a meta-analysis reported that smokers had an odds ratio of 1.61 for hemorrhagic stroke.. Even passive smokers had a 45% risk of stroke as compared to non-smokers. In our study we found that smokers presented with a lower GCS (9-11) ,higher incidence of intraventricular extension & had the greatest risk of fatality. 7/9 patients with Intraventricular extension were smokers and they comprised 12% of all mortality. Hence smoking is an independent factor for worse outcome.

ICH can be managed medically or surgically. Surgical evacuation of hematoma is reserved in patients who present with (i) superficial haemorrhage; (ii) clot volume between 20-80 ml; (iii) worsening neurological status; (iv) young age group ; (v) haemorrhage causing midline shift/raised ICP; and (vi) cerebellar haematomas > 3 cm. None of our patients were managed surgically & it is uncertain whether patients with spontaneous, non-aneurysmal ICH are at any advantage from surgical intevention. https://pubmed.ncbi.nlm.nih.gov/11092093/#:~:text=Current%20practice%20favours%20surgical%20intervention,haematomas%20%3E%203%20cm%20or%20causing)

The outcome of ICH is morbid with a 40-50% mortality rate reported within 30 days. Those who do survive are left functionally impaired and only 27% of pateints have been reported functionally independent at 90 days. https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2790105#:~:text=Intracerebral%20hemorrhage%20(ICH)%20is%20the%20subtype%20of%20stroke%20with%20the,functionally%20independent%20at%2090%20days.). A number of factors are linked to this grim outlook. A study including 2568 patients reported larger clot volume, older age, lobar location & presence of infection as additive to overall disability & mortality. Our study in addition to the mentioned highlighted smoking status, low gcs, aspiration & intraventricular extension as determinants of mortality.

Hemorrhagic stroke is a devastating & debilitating condition that is a source of both healthcare & economic strain. It is utmost that patients with modifiable risk factors are targeted & health awareness is made available for the at risk population. The importance of optimization of blood pressure, lifestyle changes & regular screening over an age of 60 must be instituted. Where in avoidable the public must be aware of first aid measures to prevent worsening of the outcome. All in all, Stroke is a looming & evolving threat especially in LMIC and it is imperative that legislature & healthcare sector collaborate to be prepared for its toll in all of its morbid aspects.

Conclusion

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Symptomology Of Acute Appendicitis in Pediatric Age Group Patients Presenting in Tertiary Care Hospital of Pakistan.

Bilal Javed[1], Ayesha Huma[2], Noor Ul Sabah Butt[3], Mudassar Gondal[4], Muhammad Haider[5],Ali Chaudhary[6] ,Omer fraz[7]
[1,3,4,6,7]Department of Pediatric Surgery, Holy Family Hospital, Rawalpindi
[5]department of trauma and orthopedics, Holy Family, Hospital, Rawalpindi
[2]Post graduate resident, surgical unit 2, holy family hospital, Rawalpindi

Author's Contribution

1,2 Conception of study
3,5 Experimentation/Study conduction
4 Analysis/Interpretation/Discussion
2 Manuscript Writing
4,6 Critical Review
6 Facilitation and Material analysis

Corresponding Author

Mudassar Fiaz Gondal,
Head of department, Department of pediatric surgery, Holy Family Hospital
Email:
Mudassarfiazgondal@gmail.com

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Abstract

Objective: The objective of this study is to determine the frequency of different presenting symptoms of acute appendicitis among paediatric age groups patients and associated role of Alvarado score in diagnosis of Acute appendicitis.

Methods: It was a descriptive cross sectional study conducted on 30 patients of paediatric age groups presenting in emergency department of Holy Family Hospital, Rawalpindi with suspecion of acute appendicitis and the presenting symptoms were expressed in the form of frequencies and percentages. Data analysis was done through SPSS.v.23 and P-value of less than 0.05 was taken significant.

Results: The mean age of the patients was 9.50±2.54. On gender distribution 21 (70%) of the population were male and the right iliac fossa (RIF) pain was the most common presented symptom among patients making up-to 93.3% of the population followed by generalized abdominal pain and vomiting. On clinical assessment rebound tenderness and tenderness were commonly observed signs among 30 (100%) of the population followed by fever and guarding. The mean Alvarado score was

Conclusion: Right iliac fossa pain, vomiting, fever, rebound tenderness and tenderness are the most commonly observed signs and symptoms that help in diagnosis of acute appendicitis irrespective of age or gender.

Keywords: Acute appendicitis, Alvarado score, Fever, Rebound tenderness.

Introduction:

Acute appendicitis is among the surgical emergencies that present to the paediatrics surgical floor. Many options are considered in the management of the pathology among children, which include open appendectomy, laparoscopic appendectomy and conservative management (1). The presentation of appendicitis greatly varies in terms of demographics, presenting signs and symptoms and associated laboratory abnormalities among paediatrics age groups when compared to adults (2). As a result, reporting of these variables is imperative among paediatrics age group because not only do these vary due to the age but also due to the difference in the geographical areas (3).

According to a study done in the UK, appendicitis accounts for approximately 1-2% of all the paediatrics admission (4). In addition to this, 1-8% children who present with abdominal pain are likely to have acute appendicitis (5). Over the years, the incidence of acute appendicitis has remarkably changed according to one study. From 3.6 to 1.1 per 10,000 among 0-4 age group, from 18.6 to 6.8 per 10,000 in 5–9 years, and from 29.2 to 19.3/10,000 in 10–14 years (6). Adding further, such variability makes the diagnosis a challenge, making misdiagnosis a common error in 28% to 57% of children in 2-12 years age group, and approximately 100% in children younger than 2 years of age (7).

Acute appendicitis is the most commonly encountered clinical disease among paediatric age group that is presented most commonly in the form of abdominal pain referred to right iliac fossa along with vomiting, anorexia, tenderness, guarding and fever (8). Various Scoring system have been introduced to assess and diagnose the acute appendicitis, but Alvarado scoring system is used most commonly in order to diagnose acute appendicitis. This scoring system is 81% sensitive and 74% specific in diagnosing acute appendicitis (9). However, it's always a diagnostic dilemma to diagnose the acute appendicitis on the basis of signs and symptoms. This particular study aims at analyzing the frequency of various signs and symptoms of acute appendicitis among patients of pediatric age groups presenting in department of emergency of Holy Family Hospital Rawalpindi.

Material and methods:

Study design and setting:

It was a cross-sectional study conducted in department of emergency of Holy Family Hospital Rawalpindi Pakistan from January 2022 to April 2022 that involved 30 Patients of paediatric age groups presented with signs and symptoms of acute appendicitis.

Characteristics of study participants:

All patients of paediatric age groups from 4 years of age to 12 years were included in our study. All patients having any congenital anomalies related or mimicking with diagnosis of acute appendicitis were excluded from our study population. The patients complaining of pre-existing gastroenteritis or signs and symptoms of acute appendicitis were also excluded from study population.

Data collection technique and study variables:

A self-structured questionnaire was filled for each patient and demographic and disease related variables were collected. Demographic variables included the age,

gender, frequency of presentation, mode of presentation, residence and primary complaint of the patient. Disease related variables included Alvarado Score, clinical assessment findings (pulse, fever, tenderness, guarding, rebound tenderness and mass) and laboratory parameters (serum sodium, serum potassium, serum chloride, total leucocyte count).

Statistical analysis:

The data were entered and analyzed in IBM SPSS version 23.0. Quantitative variables like age, frequency of presentation of acute appendicitis, Alvarado score, serum electrolytes and pulse were represented as mean and standard deviation. Qualitative variables like gender, symptoms of presentation, area of residence and mode of admission were presented as frequency and percentages. The values of total leukocyte count were further categorised into 4 main categories like less than 12 x 10^9/liter, 12-15 x 10^9/liter, 16-20 x 10^9/liter and 21-30 x 10^9/liter and each category was described in terms of frequency and percentage. A P-value of less than 0.05 was taken significant.

Results:

Demographic Variables

		Mean (Standard Deviation) (Maximum – Minimum) Count (Percentage)
Age		9.50±2.54 (12.00-4.00)
Frequency of presentation		1.03±0.18 (2.00-1.00)
Gender	Male	9 (30%)
	Female	21 (70%)
	AJK	1 (3.3%)
	Rawalpindi	29 (96.7%)
Presentation mode	Emergency	30 (100%)
Presenting symptoms	Nausea	1 (3.3%)
	Generalized abdominal pain	2 (6.6%)
	Vomiting	1 (3.3%)
	Pain RIF	28 (93.3%)
	Umbilical pain	1 (3.3%)

Table I: Demographic Variables

Pulse Rate and Alvarado Score

The pulse rate and Alvarado scores are shown in table II

	Mean	Maximum	Minimum	Standard Deviation
Alvarado Score (out of 10)	8.73	10.00	5.00	1.57
Pulse	117.83	160.00	85.00	16.89

Table II: Alvarado Score and Pulse Rate

Clinical Features on Presentation The clinical signs of the patients mainly included fever (n=20), guarding (n=17), tenderness (n=30), rebound tenderness (n=30) and presence of mass (n=3) as shown in figure 1.

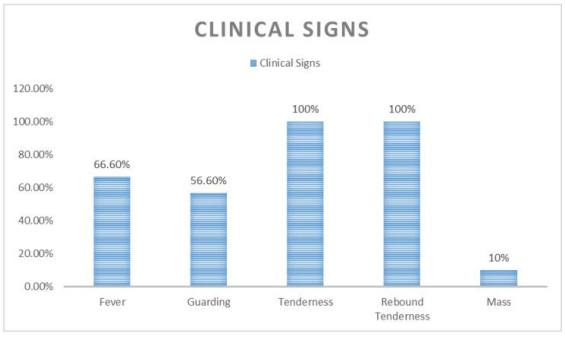

Figure I: Clinical features of the patients diagnosed with acute appendicitis

Total Leucocyte Count The TLC count was majorly between 12 to 15 x 109/litre, this included 10 of the patients. Other ranges which included <12, 16-20 and 21-30 had 9, 9 and 2 patients respectively.

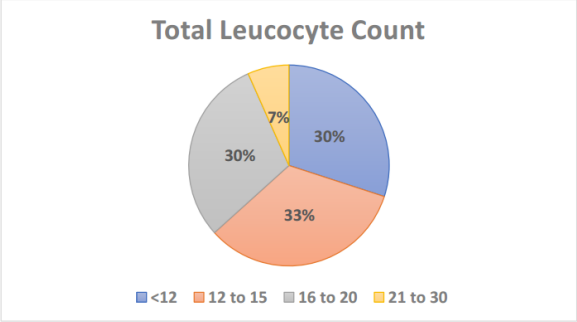

Figure II: Total leucocyte count of patients presenting with acute appendicitis

Electrolytes:

	Mean	Maximum	Minimum	Standard deviation
Sodium	132.23	141	126	4.21
Potassium	4.19	5.00	3.20	4.2
chloride	101.42	109.00	91.10	3.97

Discussion and Conclusion

Appendicitis among the children presenting to Holy Family Hospital mainly included males from Rawalpindi district presenting to emergency for the first time. The mean age of the patients was 9.5 years and most common presenting complaint was pain in right iliac fossa. On examination, all the patients (n=30) had tenderness and rebound tenderness while mass was felt in 3 patients. Leucocytosis was present in 97.3% of the patients with majority lying in the range of 12-15 x 109/liter. Majority of the patients were found to have normal electrolyte values with minimal derangement overall. Tachycardia and raised Alvarado scores were also a common feature among these patients. Acute appendicitis is classically found in all patients with right iliac fossa tenderness and rebound tenderness, hence these two features should be considered as definitive features according to the cohort of these 30 patients. Paediatric surgeons should keep an eye on male patients approximately of age 10 years presenting with pain in right iliac fossa as a typical case of appendicitis as per the findings of this case series.

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Disease Statistical Report Of The Hospitalized Pediatrics Burn Patients In Burn Unit At A Tertiary Care Setup In Rawalpindi

Fahad Abid[1], Junaid Sadiq[2], Hasnain Khan[3],

[1]Department of Plastic & Reconstructive Surgery/Burn Unit, Holy Family Hospital, Rawalpindi

[2]Public Health Specialist/Data Statistic analyst

[3]Head of department, department of plastic and reconstructive surgery, Holy Family Hospital, Rawalpindi

Author's Contribution

1,2 Conception of study
3Experimentation/Study conduction
2 Analysis/Interpretation/Discussion
1 Manuscript Writing
3 Critical Review
2 Facilitation and Material analysis

Corresponding Author

Fahad Abid,
Post graduate resident, Department of Plastic & Reconstructive Surgery/Burn Unit, Holy Family Hospital, Rawalpindi

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Abstract

This statistical report comprises of 35 pediatrics burn patients data who were admitted in Burn Unit/Plastic & Reconstructive Surgery, Holy Family Hospital, Rawalpindi. The data was collected between October 2021 to February 2022.

A self-structured questionnaire was filled for each patient demographic and disease related variable. Demographic variables include Age, Gender, and Residence with rural or urban locality, Parental educational status, and socioeconomic status of family. Disease related variables include Mode of burn, Total body surface area (TBSA) involved, Degree of burn, Number of body areas involved, Wound Culture & Sensitivity (C/S) of burn patients, and length of hospital stay in days.

Introduction:

Burn injuries are a global public health problem with physical, psychological, and economic implications for patients, their families, and society as a whole [1]. Around 90% of all burns injuries occur in low- and middle income countries (LMICs) [2]. Burns are the fourth leading cause of injury following road traffic injuries, falls, and interpersonal violence, accounting for 5 - 12% of all injuries worldwide and around 11 million patients requiring medical attention [3–5]. About 265,000 people die each year due to burn injuries according to the World Health Organization (WHO) [6]. This current burden of burn injuries is deeply inequitable, with incidence disproportionately affecting the poor and the vulnerable [7].

Around two-thirds of burn injuries occur in the African, Eastern Mediterranean and South-East Asia regions of the WHO [8]. The annual incidence of burn injuries in the Eastern Mediterranean and South-East Asia regions is estimated to be 187 and 243 per 100,000 population, respectively [9]. Mortality rates from fire-related burns are the highest in the South-East Asia region (11.6 per 100,000 population) and when compared to the 1 death per 100,000 population found in high-income countries (HICs), this is one of the largest discrepancies for any injury mechanism [2]. The pattern of burn injury and the groups affected in LMICs and HICs also differs; for example, among the 15-59 year age group, the mortality rate due to fire-related burn injury in HICs is twice as high for males compared to females, while the reverse is true in LMICs [2].

Burn injury is an important yet under-researched area in Pakistan. The Global Burden of Disease 2010 study estimates that the age-standardized mortality rate for injury caused by fire, heat, and hot substances is 5.8 per 100,000 population in Pakistan [2]. A burn facility-based study from Karachi estimated burn-associated mortality rate among adults between 15 - 55 years to be even higher at 10.2 per 100,000 population [10]. Some risk factors reported to be associated with admission and mortality include female gender, age >50 years, fire burn, inhalational injury, and total body surface area (TBSA) of >40% [11, 12]. However, most of the existing knowledge regarding burn injuries in Pakistan is from single-center studies in specialized burn hospitals found in major cities [11–15].

Material and methods:

This statistical report comprises of 35 pediatrics burn patients data who were admitted in Burn Unit/Plastic & Reconstructive Surgery, Holy Family Hospital, Rawalpindi. The data was collected between October 2021 to February 2022.

A self-structured questionnaire was filled for each patient demographic and disease related variable. Demographic variables include Age, Gender, and Residence with rural or urban locality, Parental educational status, and socioeconomic status of family. Disease related variables include Mode of burn, Total body surface area (TBSA) involved, Degree of burn, Number of body areas involved, Wound Culture & Sensitivity (C/S) of burn patients, and length of hospital stay in days.

Data collection of demographic variables in questionnaire for Residence of pediatrics burn patient was categorized among districts of Rawalpindi division, ICT and others and further divided into rural or urban localities of their respective districts. Parental education was categorized among higher education, intermediate level, Secondary

level and illiterate and socioeconomic status was defined as Upper class on basis of income more than 100,000 PKR/month, Middle class 50,000-100,000PKR/month and poor who had less than 50,000 PKR/month.

Data collection of disease related variables mode of burn was categorized in scald burn, flame burn and electric burn injuries. Wound culture and sensitivity were categorized as No growth, Single microorganism isolated, and two microorganisms isolated and degree of burn as Superficial thickness burn, deep thickness burn and mixed thickness burn.

The data were collected, entered and analyzed in IBM SPSS version 28.0. Variables were descriptively analyzed qualitative data represented in frequency, percentages, pie, and bar graphs and quantitative data represented as mean and standard deviations.

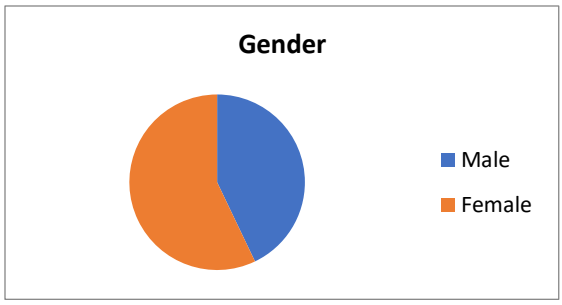
Results:

Demographic variables

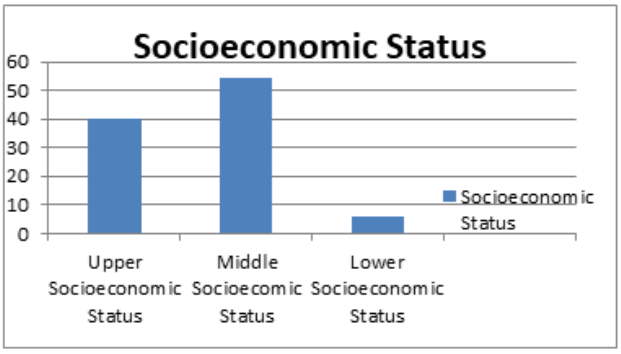
The mean age of the pediatric burn patient was 5.30 with 3.36 S.D with minimum age of 3 months and maximum 11 years of total 35 selected pediatric burn patients.

Table No.1. Age Descriptive Statistics (Mean and S.D)

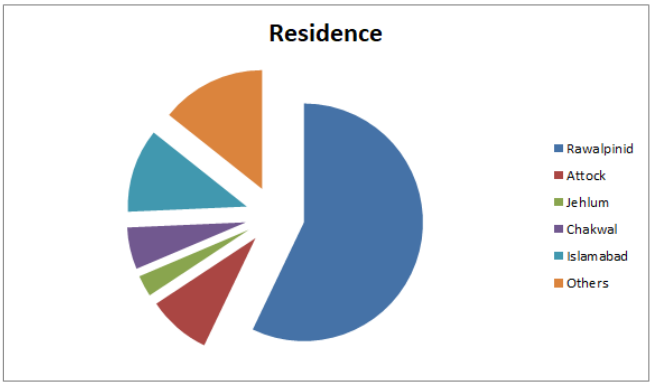
Age of Pediatric Burn Patients					
	N	Min	Max	Mean	Std. Deviation
Age	35	0.3 months	11.0	5.306	3.3647



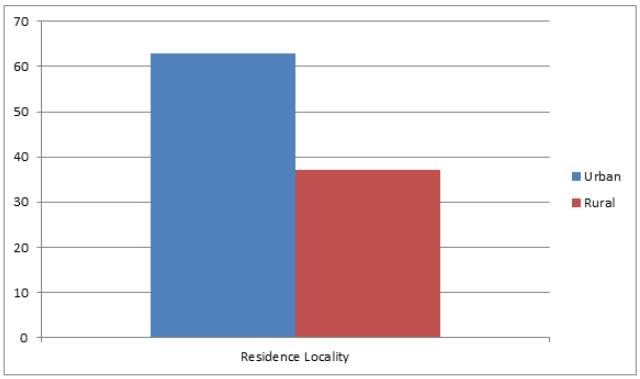
Graph.No.1. Gender (Pie Chart)

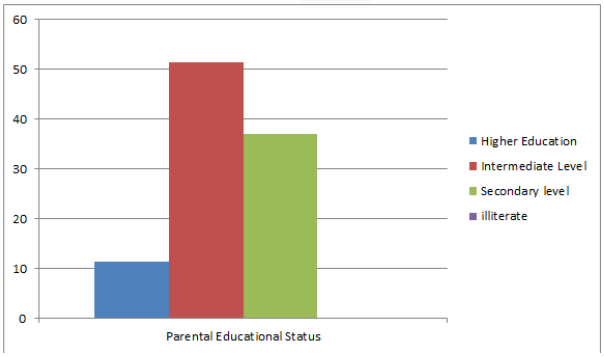


Graph.No.2. Socioeconomic status (Bar Chart)

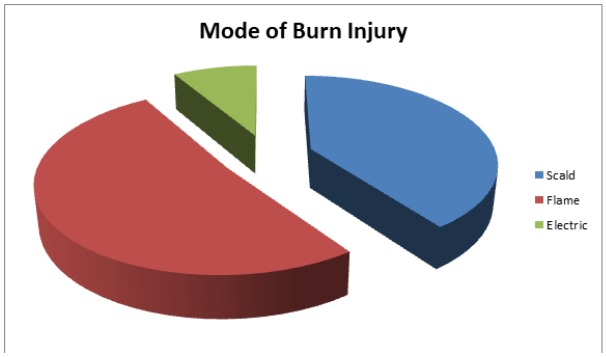


Graph.No.3. Residence with locality (Pie Chart+ bar chart)





Graph.No.4. Parental Educational status (Bar chart)



Graph.No.5. Mode of Burn Injury (Pie Chart)

Total Body Surface area (TBSA %)

The median Total Body Surface Area (TBSA) of burns was 20% with a maximum being 45% and the minimum being 7%.

Table.No.2. TBSA % Descriptive Statistics (Mean, Median, Mode and S,D)

	TBSA %
N	35
Mean	21.5714
Median	20.0000
Mode	10.00[a]
Std. Deviation	9.93593
Minimum	7.00
Maximum	45.00

a. Multiple modes exist. The smallest value is shown

Table.No.3. TBSA% Frequency

Total Body Surface Area (TBSA %)	Frequency	Percent
7	1	2.9
8	1	2.9
9	1	2.9
10	3	8.6
11	1	2.9
12	1	2.9
13	1	2.9
16	3	8.6
17	2	5.7
18	1	2.9
19	1	2.9
20	2	5.7
22	3	8.6
23	1	2.9
24	1	2.9
25	1	2.9
26	1	2.9
28	2	5.7
30	2	5.7
32	1	2.9
33	1	2.9
34	1	2.9
40	1	2.9
42	1	2.9
45	1	2.9
Total	35	100.0

Number of area involved and Hospital Stay

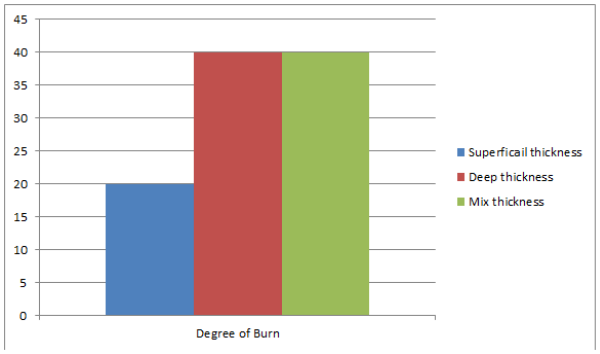
The mean duration of hospital stay was 11.42 days with the maximum and minimum duration being 23 days and 7 days respectively.

Table.No.4. Descriptive Statistics (Mean, Median, Mode, and S.D)

		Number of area involved	Hospital stay
N	Valid	35	35
	Missing	0	0
Mean		2.8857	11.4286
Median		3.0000	11.0000
Mode		2.00	11.00
Std. Deviation		1.10537	3.79075
Minimum		1.00	7.00
Maximum		5.00	23.00

Degree of Burn

Majority of pediatrics burn were Deep thickness(40%) and mix thickness(40%) and (20%) were superficial thickness.



Graph.No.6. Degree of Burn

Discussion

The Pediatric burns are a global public health problem with physical, psychological, and economic implications for patients, their families, and society as a whole [1]. Around 90% of all burn's injuries occur in low- and middle-income countries (LMICs) [2]. Burns are the fourth leading cause of injury following road traffic injuries, falls, and interpersonal violence, accounting for 5 - 12% of all injuries worldwide and around 11 million patients requiring medical attention [3–5].

The Global Burden of Disease 2010 study estimates that the age-standardized mortality rate for injury caused by fire, heat, and hot substances is 5.8 per 100,000 population in Pakistan [2].

Our study shows that in Pakistan the average age of pediatric burn patients is 5 years and according to the gender are Boys.

According to socioeconomical status, the families belong from high class are 40% of the population which is presented in tertiary care hospital. And middle-class families which were reported to tertiary care hospitals is more than 50%. And lower class which was presented in tertiary care hospitals is less in number

According to our study, their education level bar chart comes in intermediate and secondary level, as our figure shows that more than 50% of families are at the level of intermediate education and more than 40% of families are educated till secondary level.

The mode of burn was mainly from Flam and then scald burn, which leads to mix thickness and deep thickness burn.

Findings of this study shows the higher incidence in 5 years of age, which children are at school going level and start engaging in different activities for play and they can easily hide from parents' eye.

Important Aspects needs to be highlighted that here in our study the school going age 5y are the most commonly child's affected with Flam burn, it could because of that child's started engage in fire from stove or different firework activities, for which parents should educate to keep eye on their children's. Burn in pads is a depressing illness for children's as well as their families as it is having very long consequences, for which families need psychological and economical support.

Conclusion and Recommendation

The most important group of pediatric burns that should be the prime target of prevention is among those aged between 1 and 5 years with scalds being the most common type of burns with injury occurring mostly indoors in this population. The kitchen, bathroom, and living room are common areas of accidents, where proper precautionary measures should be undertaken. The age of the patient, type of burns, mode of injury, and gender were found to be factors independently affecting the involved TBSA. Because burn injuries are

largely preventable, educating parents on household safety, seeking early medical attention, and raising the awareness of the public through media could decrease the incidence of the injury.

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Frequency Of Cardiac Arrythmias In Patient With Community Acquired Pneumonia

Muhammad bilal[1], Mushtaq Ahmad[2], Sijad-Ur-Rehman[3], Romana Bibi[4], Muhammad Farhan[5], Rehman Ullah[6]

Author's Contribution

1 Conception of study
2,4 Experimentation/Study conduction
1,3 Analysis/Interpretation/Discussion
1,2,4 Manuscript Writing
4,5 Critical Review
3,5,6 Facilitation and Material analysis

Corresponding Author

Romana bibi
Post graduate Resident,
Rawalpindi Medical University
Email:Romanawazir14@gmail.com

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Abstract

Objective: To find out the frequency of cardiac arrhythmias among patients with community acquire pneumonia presenting to medical department of Hayatabad Medical Complex, Peshawar

Materials and Methods: This Cross sectional study was conducted in the Department of General Medicine, Hayatabad Medical complex, Peshawar from September 2020 to March 2021. A total of 133 patients with community acquired pneumonia were included in the study and ECG was done at baseline and at 1 week to determine the frequency of cardiac arrhythmias

Results: The mean age of the sample was 43.1 $\pm$ 9.4 years. 59.4% of the sample was male and 40.6% were female gender. Mean duration of CAP was 5.2 $\pm$ 2.2 days. 15% of the sample was diabetic, 13.5% were hypertensive and 18.8% had history of any type of cardiac disease. None of the patients at presentation had any type of arrhythmias and at one week follow up, cardiac arrhythmias was recorded in 17.3% of patients. 6.8% had AF, 3.8% had SVT and 8.8% had VT.

Conclusion: The frequency of cardiac arrhythmias is relatively high in our population with CAP. We recommend more studies on larger sample sizes and multicenter studies to report clear burden of cardiac arrhythmias in patients with CAP and predictors of cardiac arrhythmias and factors which can lead to early diagnosis for future research and preventive directions

Key Words: Community acquired pneumonia, cardiac arrhythmias, atrial fibrillation, ventricular tachycardia, supraventricular tachycardia, diabetes and hypertension.

Introduction

Community-acquired pneumonia (CAP) is an infection of respiratory tract acquire in those patient with little contact with the hospital. Facility and presented with cough, fever and having consolidation in his/her chest X-ray. It is one of the most common infectious diseases important causes of mortality and morbidity worldwide. Typical bacterial pathogens that cause CAP include Streptococcus pneumonia, Hemophilus influenza, and Moraxella catarrhalis1,2. The condition that can lead to poor outcomes including death, longer hospital stay and increased health care cost.

Globally, pneumonia is the most common infectious cause of death, the fourth most common cause of death overall, and the-second leading cause of years life lost. In 2010, lower respiratory tract infection (LRTI) accounted for 2:8 million deaths and the loss of 115 million disability-adjusted life years3,4. In USA From-January 2010 through June 2012, enrolled 2488 of 3634 eligible adults(68%) were having community acquired pneumonia out of which 93% were evident by-radiographic. The median age of the patients were 57 years (interquartile range, 46 to71; 498 patients (21%) required intensive care and 52(2%) died, In Spain, the incidence rate of overall CAP was 14 cases per 1000 person/years 00.5 and 3.5 for hospitalized and outpatient cases, respectively). In sub-Saharan Africa, estimates suggest 4 million episode of pneumonia each year, resulting in 200,000 deaths, In India male to female ratio for CAP was 2.1: in which 47 (94%) patients were admitted in the hospital. For the management and 3(6%) patients were treated on the OPD basis7. There is limited data present regarding CAP epidemiology in Pakistan.

The mortality associated with the pneumonia is 10% to 30%8. However in Pakistan it has been note up to 51%9. This high rate is also because of the cardiac related complication of pneumonia. One of the cardiac related event occur in CAP is cardiac arrhythmias. It has been noted in 9.5% of CAP cases in one study. While another meta-analysis study showed that the incidence of cardiac arrhythmia is 17.7% in community acquired pneumonia. Some study have shown much increased value of26.7% in one month follow up with more than 50% occur in first 24 hours+. The risk factors associated with it are male gender, previous cardiac arrhythmias, diabetic, smoker, some medication and older age up to 13 years.

The rationale of my study is to find .out the frequency of cardiac arrhythmias in patient with community acquire pneumonias no recent' study is found on throughout search on internet in Pakistan.

Methodology

This Cross Sectional study was conducted in the Department of Medicine, Hayatabad Medical Complex, Peshawar from September 2020-March 2021 with non-probability consecutive sampling technique. Inclusion Criteria were : all patients having Age 20-65 years, both male and female gender with CAP and willing to give consent. While exclusion Criteria: patients who are previously diagnosed with cardiac arrhythmias like atrial fibrillation or any bundle branch block, documented history of PTB or COPD, known case of valvular abnormality like RHD or congenital anomalies and case of CHR or aspiration pneumonia due to unconsciousness like cerebrovascular accident.

Patients attending the medical department in Hayatabad Medical Complex were registered in the study according to inclusion and exclusion criteria. Detailed histories of diabetes, smoking or any heart disease were obtained. Duration of pneumonia symptom was noted. The ECG was done on first day and was compared with his/her previous ECGs for any new changes. The patients were treated as per hospital protocol. These patients were followed for up to a week and ECG was repeated to look for any changes.

Results

The study was conducted on 133 patients with community acquired pneumonia (CAP). The mean age of the sample was 43.1 + 9.4 years. While distributing the patients with regards to gender, we observed that in our study 59.4% of the sample was male and 40.6% were female gender. Mean duration of CAP was 5.2 + 2.2 days. 15% of the sample was diabetic, 13.5% were hypertensive and 18.8% had history of any type of cardiac disease. None of the patients at presentation had any type of arrhythmias and at one week follow up, cardiac arrhythmias was recorded in 17.3% of patients (p-value=0.035) (table-1). 6.8% had AF (table-2) (p-value=0.024), 6.8% had SVT (p-value=0.329) (table-3), AF(17.3%) (P-value=0.488), 8.8% had VT (p-value=0.323) (table-5) and Cardiac arrhythmia 17.3% (p-value=0.323) (table-6). The subsequent tables elaborate age, duration of CAP, diabetes, HTN and history of cardiac disease wise stratification of cardiac arrhythmias.

Table 1: Cardiac Arrhythmias With Age Groups

		Cardiac arrhythmia		P value
		Yes	No	
Age categories	26-40 years	6	52	0.035
		10.3%	89.7%	
	> 40-50 years	12	28	
		30.0%	70.0%	
	> 50-60 years	5	30	
		14.3%	85.7%	
Total		23	110	
		17.3%	82.7%	

Table 2: **AF with Age Groups**

		AF		P value
		Yes	No	
Age categories	26-40 years	0	58	0.024
		0.0%	100.0%	
	> 40-50 years	5	35	
		12.5%	87.5%	
	> 50-60 years	4	31	
		11.4%	88.6%	
Total		9	124	
		6.8%	93.2%	

Table 3: **SVT with Age Groups**

		SVT		P value
		Yes	No	
Age categories	26-40 years	6	52	0.329
		10.3%	89.7%	
	> 40-50 years	2	38	
		5.0%	95.0%	
	> 50-60 years	1	34	
		2.9%	97.1%	
Total		9	124	
		6.8%	93.2%	

Table 4: **AF with duration of Cap**

		Cardiac arrhythmia		P value
		Yes	No	
Duration of CAP	2-5 days	12	66	0.488
		15.4%	84.6%	
	> 5-9 days	11	44	
		20.0%	80.0%	
Total		23	110	
		17.3%	82.7%	

Table 5: Cardiac arrhythmias with duration of CAP

		VT		P value
		Yes	No	
Duration of CAP	2-5 days	5 6.4%	73 93.6%	0.845
	> 5-9 days	4 7.3%	51 92.7%	
Total		9 **6.8%**	124 **93.2%**	

Table 6: **Cardiac Arrhythmias With DM**

		Cardiac arrhythmia		P value
		Yes	No	
Diabetic	Yes	5 25.0%	15 75.0%	0.323
	No	18 15.9%	95 84.1%	
Total		23 **17.3%**	110 **82.7%**	

Discussion

Community-acquired pneumonia (CAP) affects >5 million adults, causes 1.1 million hospital admissions, and is responsible for >60 000 deaths each year in the United States10,11. Cardiac diseases affect >30 million adult Americans and are responsible for 5 million hospital admissions and >300 000 deaths each year in this country12,13. Both CAP and cardiac diseases occur more commonly in middle-aged and elderly individuals13,14. It is estimated that more than half of the elderly patients with CAP who present to the hospital with this infection have a chronic cardiac condition14.

Pneumonia contributes to the acute worsening of preexisting cardiac conditions and can trigger new cardiac events15-18. Infection-induced changes in myocardial function, the conduction system of the heart, the stability of coronary plaques, vascular tone, and blood coagulability may all account for this effect18. Recent retrospective clinical observations suggest that incident (new or worsening) cardiac complications occur in a significant proportion of high-risk CAP patients (ie, elderly veterans and diabetics)19-23. However, the frequency of these complications in unselected CAP patients, the contribution of specific cardiac events to this burden, the timing of these complications in the course of CAP, the factors associated with their development, and their association with the short-term mortality of this infection remain unclear.

Several mechanisms, related largely to the systemic response to infection, can account for the development of incident cardiac complications in patients with CAP. Acute systemic inflammation can directly depress myocardial function and increase left ventricular afterload24. Hypoxemia decreases myocardial oxygen delivery and raises pulmonary arterial pressure and right ventricular afterload24, 25. Tachycardia increases myocardial oxygen needs and shortens diastole (when coronary perfusion occurs)26, 27. The net effect is a negative shift of the cardiac metabolic supply-to-demand ratio and further myocardial dysfunction. Myocardial inflammation (myocarditis) may also play a role28. Acute infections can promote inflammatory activity within coronary atherosclerotic plaques and induce prothrombotic changes in the blood and endothelium, resulting in plaque instability and facilitating coronary thrombosis18. Preexisting coronary artery disease that is insufficient to produce myocardial ischemia under baseline conditions can also result in significant ischemia in the face of increased myocardial oxygen demand. The ability of pneumonia to cause acute abnormalities in the cardiac conduction system has been recognized since the early 20th century and consistently confirmed thereafter29,30. In concordance

with our findings, these effects would be more prominent when the influence of the pneumonia is stronger (i.e. the first few days after CAP diagnosis). The concept of the systemic response to infection as a key element in the pathophysiology of cardiac complications in patients with CAP is further supported by the facts that 17.3% of our patients developed cardiac complications like arrhythmias.

Previous studies have treated the diff However, given the likely mechanisms at play, it is expected that their development is interrelated. Musher et al19 were the first to document that many patients with pneumonia have >1 type of cardiac event during the course of their infection.

Different types of cardiac events that occur in CAP largely as unrelated clinical outcomes20-23. Prior research has demonstrated that a significant proportion of mortality within 90 days of admission for pneumonia is attributable to other comorbid conditions31-35, and that an important number of cardiovascular events occur during, or soon after, hospitalization for pneumonia. Most of these studies focused on the association between pneumonia and acute coronary syndromes, although one study31 also described a significant occurrence of worsening congestive heart failure and new-onset arrhythmias at the time of hospitalization for pneumonia. However, there are few data on the association between pneumonia and cardiac arrhythmias. Our study found that new-onset arrhythmias occur in a significant number of patients with pneumonia. Our rates were higher than those reported in Musher et al's study31; One proposed explanation for the increased risk in cardiovascular arrhythmias around the time of respiratory infection is the increase in serum inflammatory cytokines in serious infections36,37. Other possible explanations include disturbed hemodynamic homeostasis, prothrombotic conditions, and increased catecholamine release38. Additionally, acute infections may have a direct inflammatory effect on coronary arteries, myocardium, and pericardium, as well as direct infection of cardiomyocytes, which may lead to the development of acute arrhythmias39-47. Also, acute physiologic or metabolic disturbances associated with pneumonia, such as hypo/hyperthermia, electrolyte abnormalities, and hypoxemia, may provoke arrhythmias. The development of cardiac arrhythmias was associated with greater severity of illness, as evidenced by increased length of hospital stay, increased rate of intensive care unit admission, more frequent use of vasopressors, and greater need for mechanical ventilation, as well as increased mortality. Factors associated with decreased risk of arrhythmia included use of beta-blockers before admission, which may prevent arrhythmias due to their pharmacologic profiles44. Dementia also was associated with a decreased risk of arrhythmias, The major strength of our study is that we have a very large sample size from over ample.

Conclusion

The frequency of cardiac arrhythmias is relatively high in our population with CAP. We recommend more studies on larger sample sizes and multicenter studies to report clear burden of cardiac arrhythmias in patients with CAP and predictors of cardiac arrhythmias and factors which can lead to early diagnosis for future research and preventive directions

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Hepatocellular Carcinoma: A Perspective Of Chronic Liver Disease

Naseem-Ur-Rahman[1], Arshad Ali Shah[2], Sijad-Ur-Rehman[3], Romana Bibi[4], Irfan Khan[5], Zia-Ur-Rahman[6], Amir Hamza[7], Arhamna Labal[8]

Author's Contribution

1,2 Conception of study
3,5 Experimentation/Study conduction
4 Analysis/Interpretation/Discussion
7 Manuscript Writing
8,9 Critical Review
6 Facilitation and Material analysis

Corresponding Author

Romana bibi
Post graduate Resident,
Rawalpindi Medical University
Email:Romanawazir14@gmail.com

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Abstract

Background: The most common kind of primary liver cancer is hepatocellular carcinoma (HCC), which differs from other types of primary liver cancer both histologically and etiologically. Cirrhosis is an established chronic liver disease that affects 70% to 90% of individuals with HCC.

Objective: To determine the prevalence of hepatocellular carcinoma in patients with chronic liver disease.

Methodology: This Cross Sectional Study was conducted in the Department of General Medicine, LRH, Peshawar over a period of 6 months from July 2019-December,2020 with 143 patients of chronic liver disease were included . Bio data like name, gender, age, duration of complaint, HBV/HCV (Hepatitis B virus/Hepatitis C virus) status, AFP levels and weight were recorded. All patients were sent to radiology department for hepatocellular carcinoma (HCC) detection.

Results: Age range of the study population was from 30-60years with mean age of 47.272±5.31years. Mean duration of complaint was 18.937±4.32months, mean weight was 62.419±6.08Kg, mean height was 1.586±0.06m and mean BMI was 24.979±3.50Kg/m. Male patients comprised the major portion with 79% as compared to 21% of the females. HCV+ve Patients were 77.6% as compare to 22.4% HBV infection. Smokers comprised 26.6% of the studied patients. Hepatocellular carcinoma was seen in 8.4% of the patients.

Conclusion: HCC in patient with Cirrhosis Liver mostly due to HCV and HBV infection is fairly common in our setup. Patients who exhibit any symptoms or have a history of blood transfusions or surgeries should be screened for virology status to ensure that they are swiftly detected and treated before their livers become cirrhotic and develop hepatocellular carcinoma.

Keywords: Chronic liver disease, Cirrhosis liver, HCV, HBV infection, Hepatocellular carcinoma

Introduction

Hepatocellular carcinoma (HCC), the most prevalent form of liver cancer and the main reason for cancer-related deaths globally. HCC is the 9th greatest cancer's cause death in the United States1. In 2013, new liver and intrahepatic bile ducts have been studied in 30,640 people tumors were diagnosed, with 21,670 fatalities2. In Eastern and Southern Asia, Middle and Western Africa, males were diagnosed with HCC at a rate that was higher than females (2.4:1), Melanesia, and Micronesia/Polynesia3. The incidence of liver cancer in American Indians and Alaskan Natives, adjusted for age has grown from 1.6 per 100,000 to 4.6 per 100,000, followed by blacks, whites, and Hispanics4. Chronic Hepatitis B (HBV) or Hepatitis C (HCV) infections are the main causes of HCC5. The body's reaction to multiple bouts of chronic liver disease (CLD) includes hepatocyte accelerated (cellular response), as well as a rise in the number of stellate cells activity with time6, Fibrosis is defined as an increase in extracellular matrix production (an acellular reaction) with a concomitant increase in extracellular matrix production (an acellular response). TGF1 is known to be highly pro-fibrogenic at the molecular level, and it is likely to contribute to CLD pathogenesis. Furthermore, the paper by Qin et al17 TGF1 and MMP-8 are activated in HCC cell lines in a reciprocal manner. Upregulation of MMP-8 may be present in cirrhotic and HCC nodules enhance tumour growth and metastasis since It's a protease that helps with the destruction of extracellular matrix. In a study by Marcon PDS, et al has showed that frequency of hepatocellular carcinoma was 6.4% in patients with chronic liver disease8. Another study by Hung TH, et al. has showed that frequency of Hepatocellular carcinoma was 24.7% in patients with chronic liver disease9.

According to current data, both the normal course of liver disease and prognosis following hepatitis therapy have taken a negative turn, implying that Cirrhosis and HCC are substantially more common in this population. No such study has been done before in our local-population Moreover studies in different populations have produced variability in results as shown above8,9. This prompted me to conduct this study in order to determine the frequency of patients with hepatocellular carcinoma and chronic liver disease. Results of my study will not only help to identify the magnitude of the problem among our community people but also pave the way for counseling of hepatitis patients to strictly adhere to its medical treatment.

Methodology

From July 2019-December 2020, a 6-month cross-sectional study was done in the Department of General Medicine at LRH Peshawar. Inclusion Criteria: both male and females patients having age 30-60 years and diagnosed case of Chronic liver disease. While Exclusion Criteria: Pregnant women on ultrasound, history of other type of hepatitis and history of o alcoholic liver disease or nonalcoholic steatohepatitis

143 patients fulfilling the inclusion criteria from outpatient's department of general medicine, LRH, Peshawar were included in the study following approval from the ethical review committee and the research department. Informed consent was taken from all patients. Basic information like name, gender, age, duration of complaint, HBV/HCV status, AFP levels and weight were recorded. All patients were sent to

radiology department for the diagnosis of hepatocellular carcinoma as per operational definition and noted by researcher himself on pre designed proforma.

Results

The participants in this study range in age from 30 to 60 years old, with a mean age of 47.2 +5.31 years, mean duration of complain was 18.937±4.32 months, mean weight was 62.419±6.08 Kg, mean height was 1.586±.0.06 meters and mean BMI was 24.979±3.2. Male gender was dominant with 79% as compared to 21% females. Patients with HCV were 77.6% as compare to 22.4% with HBV. A total number of 12(8.4%) patients having positive HCC status when analyzed with the duration of the disease, 9(7.5%) were having a duration of 12-24 months while 3(13%) were having >12 months with (p=0.380) (table-1). A total number of 12(10.8%) of the patient were HCV+ve while none were having Hepatitis B with (p=0.052) (table-2). 12(8.4%) of the chronic smoker when analyzed were having HCC+ve status with (p<0.001) (tabe-3). HCC+ve positive patients BMI were analyse 6(7.5%) were having <25 (kg/m)2, 9.5% with >25 (kg/m)2 with (p=0.665).

Table-1: Duration of symptoms

Duration of complaints (months)	Hepatocellular carcinoma		P value
	Yes	No	
12-24	9(7.5%)	111(92.5%)	0.380
>24	3(13%)	20(87%)	
Total	**12(8.4%)**	**131(91.6%)**	

Table-2: HCC relationship with HBV/HCV

HBV/HCV	Hepatocellular carcinoma		P value
	Yes	No	
HBV	0(0%)	32(100%)	0.052
HCV	12(10.8%)	99(89.2%)	
Total	**12(8.4%)**	**131(91.6%)**	

Table-3: HCC relationship with Smoking

Smoker	Hepatocellular carcinoma		P value
	Yes	No	
Yes	12(31.6%)	26(68.4%)	0.000
No	0(0%)	105(100%)	
Total	**12(8.4%)**	**131(91.6%)**	

Discussion

In this cross sectional study, the frequency of HCC in chronic liver disease is evaluated the frequency of HCC in chronic liver disease patient in the study is 8.4%. In a study by Marcon.P dos S, et al8 has showed that frequency of hepatocellular carcinoma was 6.4% in patients with chronic liver disease. In another study by Hung TH, et al. has showed that frequency of hepatocellular carcinoma was 24.7% in patients with chronic liver disease9.

Among total of 12 chronic liver disease patients with HCC in my study, all of them are men, which is consistent with the present literature. In practically all populations, previous studies suggest a male to female ratio of 2:1 to 4:1 in individuals with HCC10. Approximately 79% of individuals with cirrhosis in this study are men. The male prevalence in HCC may be due to this. This

could indicate that the male predominance in HCC is simply due to male patients having a higher rate of liver cirrhosis. In the study 12 chronic liver disease patients with HCC, all have HCV positive status and none of the HBV positive chronic liver disease patients has HCC. This suggests higher incidence in HCV related chronic liver disease. In all 12 chronic liver disease patients with HCC are smoker.

The hepatitis B virus (HBV) vaccination programme has dramatically reduced the incidence of HCC in children and adolescents in several countries11. Huang et al, found later that the risk of developing HCC climbed in women with anti-HCV positivity but decreased with age in HBsAg-positive men12. Additional research is needed to explain these findings, according to Huang et al. These findings encourage doctors to keep an eye on all cirrhotic patients for HCC, regardless of gender. Because laboratory information is not included in the dataset, this study is limited in its ability to assess the severity of liver cirrhosis as measured by validated grading systems such as the MELD score or the Child-Pugh score.

HCC was found in 7 (12.7%) of 55 individuals in a research conducted in Pakistan. Males had a considerably higher rate of HCC, with 5 (9.09%) of patients having it (p=0.04). In our analysis, 12 HCV+ve individuals (10.8%) had HCC positive results (p=0.052)13. According to another study conducted in Pakistan, 5.94% or 6 of these people developed hepatocellular carcinoma. Hepatitis C (67.3%) is the most common cause of Chronic liver disease was the leading cause (18.8%), followed by hepatitis C and B (7.9%), and hepatitis B alone (7.3%), (5.9%). HCC positive results were found in 12 HCV+ve individuals (10.8%) in our study14.

According to the study, Recent epidemiological changes in the two main risk factors for HCC mimics are the post-sustained virology response to the hepatitis C virus and the suppressed hepatitis B virus on nucleoside15. While in our study 12(10.2%) patients were HCV+ve and none were HBs+ve who came out to HCC+ve.

According to a Mehmet Sayiner et al16. Asia and Africa have the greatest rates of HCC incidence, while North America and Europe have lower rates. While HCV is the most frequent cause of HCC in the USA, HBV is still thought to be the primary cause of HCC globally. According to a US study, all individuals with cirrhosis and high-risk hepatitis B should be monitored for the development of HCC17. While in our study 12(10.2%) patients were HCV+ve and none were HBs+ve who came out to HCC+ve.

According to a study by Ul Abideen, Zain, et al18, 66% of HCV-positive patients had the HCV genotype 3a, which suggests that people 50 and older have a five-fold increased risk of having HCV-HCC (odds ratio = 5.6, 95% confidence interval: 3.02-10.01). While in our study 12(10.2%) patients were HCV+ve who came out to HCC+ve.

Hepatitis C and B infection, dietary carcinogens, and growing lifestyle changes continue to be key hazards for rising HCC incidence, according to a study from Islamabad by Zain et al19. Major risk factors for HCC in our area include hepatitis C and B, non-alcoholic fatty liver disease, and aflatoxin-mediated HCC. Based on research done in Sindh Pakistan Hepatitis C and B were more common than hepatitis A and B

combined, however, with a respective incidence of 14.3% and 6.7% of chronic liver disease20. While in our study 12(10.2%) patients were HCV+ve and none were HBs+ve who were later on diagnosed to have HCC+ve on follow up.

In a study done in Korea, there were 2744 cases of hepatocellular carcinoma. In the, cirrhosis raised the risk of HCC by 42 times, followed by hepatitis B virus (21 times) and hepatitis C virus (HCV; 19 times), current smoking increased the risk by 25%, and alcohol use increased the risk by 6%21. According to a study by Jie Yang et al22, patients with hepatcellular carcinoma (n=1,020) had a median age of 64 and were 83% male. The main causes of underlying liver diseases were alcohol consumption (35%), HCV (25%) with p=0.007, NAFLD (12%), and HBV (9%) with (p=0.03). Additionally, 51% of the patients had cirrhosis. While in our study 12(10.2%) patients were HCV+ve and none were HBs+ve who came out to HCC+ve with (p=0.052).

Josep M. Llovet et al23 study, about 90% of instances of liver cancer are hepatocellular carcinoma (HCC), which is the most prevalent kind. The main risk factors for the development of HCC are hepatitis B and C virus infection, while non-alcoholic steatohepatitis linked to metabolic syndrome or diabetes mellitus is increasingly common in the West. A research project by Aileen Baecker et al24, Hepatitis B infection, which is most common in Asia, is responsible for 44% of all hepatocellular carcinoma cases globally. 21% of cases were brought on by hepatitis C. According to a study by X-J Kuang et al25., the incidence of HCC was considerably lower in individuals who underwent HBsAg seroclearance compared to those who did not (1.86% vs. 6.56%, P=0.001). Cirrhosis (incidence with vs. without: 9.51% vs. 1.66%)having (p=0.052).

Conclusion

In conclusion, in our community, liver cirrhosis is linked to a higher risk of HCC. Patients who exhibit any symptoms or have a history of blood transfusions or surgeries should be screened for virology status to ensure that they are swiftly detected and treated before their livers become cirrhotic and develop hepatocellular carcinoma.

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Frequency Of Transfusion Related Infection in the Thalasemia Patient On Chronic Blood Transfusion

Usman Ghani[1], Mushtaq Ahmad[2], Sijad-Ur-Rehman[3], Muhammad farhan[4], Romana Bibi[5], Shahinda[6]

[1]postgraduate Resident /Medicine /Lrh /Mti/ Kpk/ Pakistan

[2] Postgraduate Resident /Medicine /Lrh /Mti /Kpk /Pakistan

[3]associate Professor, Pediatrics, Gkmc /Bkmc /Mti /Kpk, Pakistan

[4]postgraduate Resident Neurosurgery Lrh /Peshawar /Kpk, Pakistan

[5] Postgraduate Resident, Gynae/Obs, Kth /Mti, Peshawar, Pakistan

[6]postgraduate Resident, Gynae/Obs, Hmc/ Mti, Peshawar, Pakistan

Author's Contribution

1 Conception of study
2,4 Experimentation/Study conduction
1,3 Analysis/Interpretation/Discussion
1,2,4 Manuscript Writing
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3,5,6 Facilitation and Material analysis

Corresponding Author

Romana bibi
Post graduate Resident,
Rawalpindi Medical University
Email:Romanawazir14@gmail.com

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Abstract

Introduction: Thalassemia major is a hereditary blood disorder caused by a defect in the one or more of the hemoglobin chains. It is characterized by decreased synthesis of hemoglobin subunits (beta chain of hemoglobin in beta thalassemia), leading to hypochromic microcytic anemia. Transfusion related infections are also worrisome in patient with chronic blood transfusions.

Objective: To determine the frequency of transfusion-related infections (hepatitis B and hepatitis C) in patients with thalassemia with chronic blood transfusion.

Methodology: This Cross Sectional study was conducted in the Department of Medicine, Hayatabad Medical Complex, Peshawar, over a period of 6 months from June 2020-Dec 2020. A total of 203 patients with transfusion dependent beta thalassemia were included in the study in a consecutive manner and checked for presence or absence of HBV and HCV.

Results: The mean age of the total patients were 23.9 $\pm$7.2 years. We had 69.5% males and 30.5% female patients. Mean duration of transfusion was 40 + 23.7 months and mean No of transfusions were 3.7 + 1.3/month. 49.8% of patient reported private blood foundations as main source of blood transfusions in the past. HBV was recorded in 9.9% and HCV was recorded in 20.2% of patient.

Conclusion: HCV and HBV are common in our population with transfusion dependent beta thalassemia. However, our study recorded no association with no and frequency of transfusions. We recommend more studies preferably on larger sample sizes and multicenter surveys to bring conclusion for future policy and research recommendations regarding viral infections in patients with thalassemia.

Key Words: Beta Thalassemia, Hemoglobin Electrophoresis, Hepatitis B virus, Hepatitis C virus

Introduction

Thalassemia major is an inherited blood disorder caused by a defect in one or more hemoglobin chains. It is characterized by decreased synthesis of hemoglobin subunits (beta chain of hemoglobin in beta thalassemia), leading to hypochromic microcytic anemia. These patients need frequent blood transfusions and are associated with the risk of developing infectious diseases such as hepatitis and AIDS that can increase mortality in these patients compared to normal population. One of the most common is thalassemia major blood diseases of genetic origin that causes many problems for patients. The prevalence of α-thalassemia, β-thalassemia, and α+β thalassemia was found to be similar shown to be 7.88%, 2.21%, and 0.48%, respectively, respectively1. In another study only the β-thalassemia carrier frequency was estimated to be 16.2% in general population2. A Pakistani study found that congenital marriages and lack of awareness are the main contributors to the increased burden of disease from thalassemia3. Transfusion related infections are also worrisome in patient with chronic blood transfusions. In a study of multiple transfusions patients showed that 23% of patients were positive for anti-HCV antibodies, while 7% of patients were positive for HBsAg4. Another study showed among 470 patients diagnosed with Beta thalassemia major, 37 (7.87%) were positive for hepatitis B surface antigen, 216 (45.96%) 4 cases were positive for hepatitis C antibodies and 22 (4.68%) cases were positive for both HBsAg and ant HCV Abs5. Other study on chronic blood transfusion patient for thalassemia showed that 25 Antibody to HCV was found in all of the patients (20.7%) PCR verified 22 of them as positive, 6 were those who are sick (5%) HBsAg-positive6.

The rationale of my study is to find out the frequency of transfusion related infection in patients with multiple transfusions for thalassemia major as in our institute there in no recent study in our local population regarding this and also there is little awareness about it in our province.

Methodology

This Cross Sectional study was conducted in the Department of Medicine, Hayatabad Medical Complex, Peshawar, over a period of 6 months from June 2020-Dec 2020 with Non probability consecutive sampling technique. A total of 203 patients with transfusion dependent beta thalassemia were included in the study in a consecutive manner and checked for presence or absence of HBV and HCV. Inclusion criteria: both male and female gender having Age of 15 – 40 years a, All patients with thalassemia and chronic blood transfusion as per operational definitions while Exclusion criteria: Patients with previous history of any type of ear surgery obvious from previous medical record and those with duration of less than 6 months for blood transfusion.

Approval from the Ethical committee was taken and patients presented to medical department for blood transfusion was evaluated as per selection criteria. Written informed consent was taken from all participant of the study. Patient's age, sex, duration of blood transfusion and number of pints transfused per month was noted. Patient blood transfusing from a teaching hospital, from a blood foundation or from a non-teaching hospital was note. Patient serum was taken and was sent for hepatitis B antigen and anti-hepatitis C antibodies by ELISA from

hospital laboratory. On these results, patient was labeled as hepatitis C or B positive/negative. All the data was collected by the researcher himself and was noted in the proforma

Results

The study was carried out in 203 patients with thalassemia major. The mean age of the overall sample was 23.9 + 7.2 years. While distributing the patients with regards to gender, we observed that we had 69.5% males and 30.5% female patients. Mean duration of transfusion was 40 + 23.7 months and mean No of transfusions were 3.7 + 1.3/month. 49.8% of patient reported private blood foundations as main source of blood transfusions in the past. For duration of 12-48 months HBV (9.2%) (P-value=0.595), HCV (19.7%) (P-value=0.778) (table_1), while for >48-96 months HBV (11.8%) and HCV(21.6%) (table_2) were recorded. For transfusion of 2-4/month the frequency of HBV (21.1%) (P-value=0.077) (table_3), HCV (21.5%) (P-value=0.451) (table_4) while for >4-6/month transfusion HBV was 3.7% (P-value=0.077) and HCV 16.7% (P-value=0.451).

Table 1: Duration of transfusion with of HBV

		HBV		P value
		Yes	No	
Duration of transfusion	12-48 months	14	138	0.595
		9.2%	90.8%	
	>48-96 months	6	45	
		11.8%	88.2%	
Total		20	183	
		9.9%	90.1%	

Table 2: Duration Of Transfusion With of HCV

		HCV		P value
		Yes	No	
Duration of transfusion	12-48 months	30	122	0.778
		19.7%	80.3%	
	>48-96 months	11	40	
		21.6%	78.4%	
Total		41	162	
		20.2%	79.8%	

Table 3: Frequency of transfusion wth HBV

		HBV		P value
		Yes	No	
No of transfusions	2-4/month	18	131	0.077
		21.1%	87.9%	
	>4-6/month	2	52	
		3.7%	96.3%	
Total		20	183	
		9.9%	90.1%	

Table 4: Frequency of transfusion with of HCV

		HCV		P value
		Yes	No	
No of transfusions	2-4/month	32	117	0.451
		21.5%	78.5%	
	>4-6/month	9	45	
		16.7%	83.3%	
Total		41	162	
		20.2%	79.8%	

Discussion

Every year millions of Blood is obtained from donors in units around the world, as opposed to blood transfusion an essential part of the treatment of patients afflicted with various diseases, in particular haematological diseases. A 2013 record shows that more than 112 million blood donations were made worldwide that year7. Consequently, transfusion-borne infections (TTIs) remain a serious public health problem in many different places of the globe, and patients with multiple Transfused thalassemia is a type of inherited hemoglobinopathies caused by mutations in the beta-globin chain of

haemoglobin difficult situation risky situation of TTIs8,9. These blood diseases are inherited are most commonly found in countries in the thalassemia belt, which includes the Mediterranean and parts of West Africa, North Africa, the Middle East, and countries in South Asia and Sri Lanka10. Because thalassemia patients, particularly Major beta thalassemia (BTM) patients and a group of e-beta thalassemia haemoglobin (EBT) patients, are dependent on blood transfusions, and these patients are highly susceptible to viral infections spread by transfusion. The second most common cause of death is viral infections after heart failure and the leading source of morbidity in patients suffering from thalassemia, after that those with parasitic and bacterial infections11. Although hepatitis B virus (HBV), hepatitis C virus (HCV), human immunodeficiency virus (HIV), West Nile virus (WNV), human T-cell lymphotropic viruses were known to I, II (HTLVI / II), HCV and HBV were the majority of common thalassemia etiological agents of chronic viral hepatitis and hepatocellular carcinoma patients12.

In developed countries, due to careful and efficient screening, the risks of ITT have been practically eliminated approaches13. However, the difficulties in developing countries extend across from donor selection to post-transfusion care, the entire blood safety chain monitoring, and these dangers truly a burning issue for public health development14. Many countries in EMRO region lie in the global thalassemia belt15. Patients who require blood transfusions TMB and EBT regularly receive transfusions with different transfusion frequencies every 7 to 120 days. Although mandatory, the standards recommended by the For donor blood, the World Health Organization testing in developing countries are not always followed due to a lack of resources and the sometimes shortage of donated blood consciousness16. BTM and EBT patients that require blood transfusions suffer not only from variety of complications due to because to the sickness itself, but also because of a lack of adequate screening methods for donated blood, making Infections transmitted through blood transfusion a threat as ‘Silent killers17.

Minimizing the risks of ITT is highly dependent on the list of suitable blood donors by screening of the blood with sensitive pathogen detection precautions, and other methods will reduce the risk of allogeneic transfusion of blood. However, disease transmission continues to occur when the method of testing fails to detect disease in the "pre-seroconversion" or "window" phase of its Viruses that are immunologically variant of infections, chronic non-seroconverted or immuno-silent carriers, and tests from laboratory errors18. Immunochromatographic (TIC) tastings were typically performed in hospitals prior to each transfusion to screen for the presence of a variety of common infections in donor blood. However, confirmatory procedures such as ELISA or molecular methods have not been used to validate these ICT-based rapid diagnostic test (RDT) kits, and ICT-based methods have not been verified generally having a sensitivity and a Low specificity in identifying the most important problems TTIs18,19.

People who have occult HBV (no HBsAg but HBV DNA in their liver) tissue with or whether there is HBV DNA in the blood, not be detected by means of conventional ICTs kits20. An earlier the study also revealed that the sensitivity of ICT-based rapid tests was insufficient to detect a donor's hepatitis

status, and these kits were unable to detect specific predominant HBV serotypes in a specific region14. HBV DNA detection using performing nucleic acid testing (NAT) it has been reported that has the ability to shorten the central window time to lessen residual risk21. The number of patients infected with HCV was counted in this study was greater than that of HBV. At this point It should be noted that, despite the fact that some vaccination protection against HBV in our region, there is still no vaccine available against HCV yet22. This could explain why more people with thalassemia were HCV infection is more common than HBV infection. The infection rate was discovered to be higher in those patients who are received a lot of transfusions, suggesting that patients with Multi-transfused thalassemia is more common susceptible to infection. This is consistent with previous evidence, which suggests that receiving multiple transfusions over a considerable amount of time can cause immune modulation, leading to susceptibility to infection13.

However, a previous study had revealed that ELISA could only HBsAg is detected, while PCR in real time determined the status of infection through detection, it represents HBV-DNA14. Alternatively, the recombinant immunoblot assay (RIBA) has higher detection precision HCV22. Patients with multiple transfused thalassemias, iron overload after splenectomy can lead to increased immune dysfunction, making them more susceptible to infections23. Also, in an emergency, it is common to make blood donations that are dangerous from professional donors who haven't provided any proof, most of who are drug abusers24. Although patients with transfusion-dependent beta-thalassemia have a higher morbidity rate has now been reduced due to effective knowledge of Iron chelation therapy and safe blood transfusions, new complications such as hepatocellular carcinoma are emerging in those who have thalassemia, possibly related to the Iron excess and persistent infections are both carcinogenic25. In particular, patients with thalassemia who are HBV and HCV co-infected patients have an increased Cirrhosis and hepatocellular carcinoma are at a higher risk when compared to those who are mono-infected patients26.

Therefore, There is no other option to make the process of blood transfusion is made safer properly selecting healthy volunteer blood donors, in conjunction NAT, on the other hand, identifies viral agents earlier in the process "window period" than other immunoassays. Furthermore, HBVDNA and HCVRNA screening should be done to avoid any risk during the blood transfusions23. According to research conducted in India, China, and Saudi Arabia, NAT-based screening HCV and HBV testing methods had demonstrated the effectiveness of screening to protect blood recipients from TTIs27-29. In addition, the inclusion of HBV-NAT in the US, together with regard to the HBV vaccination policy, has contributed significantly to the safety of blood transfusions and the reduction of HBV risk remains infections30. In the United Kingdom, NAT has reduced the risk of HCV by 95% the risk of HIV by 10%31. However, if viremia levels are very low, NAT may not be powerful enough at detecting infections. Regardless of these limitations, the NAT and serological tests in combination to ensure safe blood transfusion can reduces the incidence of viral infections during transfusion and consequently improves patient quality of life from thalassemia patients12.

Pakistan has the second-highest number of HCV cases worldwide with a prevalence of 5.9% in the population of 10 million, total population. Our findings revealed a sero-prevalence of 20.2%; however, previous studies reported a HCV prevalence has a wide variation (5.5% to 68.2%) 181-185. The HCV infection is currently prevalent in TM patients in Iran is 13.6%, 14.7% in Bangladesh and 11-30% in India32-36. The current HCV prevalence in TM, the patient is 13.6% in Iran, 14.7% in Bangladesh and 11-30% in India37-40. The high prevalence of HCV in Pakistan is mainly due to the lack of a centralized system, specialized care centers, paid voluntary blood donation (VNRD), Patients with low socioeconomic status, and inadequate blood donation screening41. The majority of these patients have limited

access to safe healthcare, normal blood transfusions36. Only 12% of patients are given a screened Iron chelation is available to 40% of patients, while transfusion is available to 40%42. Our results revealed that HBV in TM patients had a prevalence of 9.9%, second most common, while the reported sero-prevalence ranged between 0.66% and 7.42-36. Our results were similar to most of the studies32-36, however, other studies have been reported different results due to fluctuations in the prevalence of the disease in different regions of the world and non-standardized transfusion methods in some facilities due to a lack of resources. Although the prevalence of HBV is lower than previously thought that of HCV due to improved immunization status, it is still higher than the global prevalence of HBV in patients with thalassemia, ranging from 0.3% to 5.7%43. HBV immunization The situation is improving, but not to the point where it can be optimized. Only 27.5 percent of thalassemia patients and families were aware that treatment was required. Immunization because of a lack of awareness, resources, financial difficulties, and proper counselling.

Conclusion

HCV and HBV are common in our population with transfusion dependent beta thalassemia. However, our study recorded no association with no and frequency of transfusions. We recommend more studies preferably on larger sample sizes and multicenter surveys to bring conclusion for future policy and research recommendations regarding viral infections in patients with thalassemia.

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Pulmonary Hypertension in Chronic Obstructive Pulmonary Disease

Naseem-Ur-Rahman[1], Nasir Khan[2], Mati Ullah[3], Amir Hamza[4], Arshad Ali shah[5], Romana Bibi[6]

Author's Contribution

1 Conception of study
2,4 Experimentation/Study conduction
1,3 Analysis/Interpretation/Discussion
1,2,4 Manuscript Writing
4,5 Critical Review
3,5,6 Facilitation and Material analysis

Corresponding Author

Romana bibi
Post graduate Resident,
Rawalpindi Medical University
Email:Romanawazir14@gmail.com

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Abstract

Introduction: Pulmonary hypertension encompasses a heterogeneous group of disorders with the common feature of elevated pulmonary vascular resistance. Patients often present with nonspecific symptoms of worsening weakness and dyspnea on exertion. Pulmonary hypertension is a progressive disease with treatment focused on management of symptoms and treatment of underlying diseases.

Objective: To determine the frequency of pulmonary hypertension in patients with chronic obstructive pulmonary disease presented to tertiary care hospital.

Methodology: This Cross Sectional Study was conducted in the Department of Pulmonology, Lady Reading Hospital, Peshawar from November 2020 to May 2021. A total of 144 patients of both gender with chronic obstructive pulmonary disease were included in the study. Echocardiography was performed by the same cardiologist using a Vivid 3 instrument (General Electric, US) and by utilizing a 2 MHz probe. Data regarding pulmonary hypertension was noted.

Results: Age range in this study was from 40 to 80 years with mean age of 60.944±7.50 years, mean duration of COPD was 10.625±3.21 months and mean weight was 82.493±8.47 Kg. Male patients were 72.9% and females were 27.1%. Pulmonary hypertension was observed in 10.4% patients with chronic obstructive pulmonary disease.

Conclusion: The study concluded that PH is prevalent in advanced COPD and associated with a significant high risk for mortality and morbidity.

Keywords: Chronic obstructive pulmonary disease, pulmonary hypertension.

Introduction

Pulmonary hypertension encompasses a heterogeneous group of disorders with the common feature of elevated pulmonary vascular resistance. Patients often present with nonspecific symptoms of worsening weakness and dyspnea on exertion. Pulmonary hypertension is a progressive disease with treatment focused on management of symptoms and treatment of underlying diseases[1].

Pulmonary hypertension (PH) arises from many etiologies. In 1998, the World Health Organization (WHO) organized PH into 5 classifications according to the cause, and these classifications were updated in 2013. Group 1 can be thought of as primary pulmonary hypertension, or pulmonary arterial hypertension (PAH). Among this group, idiopathic PAH is the most common condition, with other causes such as toxin-induced, connective tissue disorders, and other related conditions being less prevalent. Group 2 involves PH due to left heart disease, which is the most common cause of PH. Group 3 PH is due to lung diseases such as chronic obstructive pulmonary disease and interstitial lung disease. Chronic pulmonary thromboembolism causes group 4 PH, and group 5 PH is due to unclear or multifactorial causes[1-4].

PAH is a rare disease. The estimated prevalence is between 15 and 50 cases per million individuals. Among those with PAH, idiopathic PAH is the most common and is more common in women than men. Pulmonary hypertension due to other diseases, such as chronic heart or lung diseases, reflects epidemiology similar to the associated disease[5,6].

PAH is most-commonly idiopathic and is characterized by increased vascular resistance and blood vessel narrowing within the pulmonary vasculature. Restricted flow through pulmonary arteries, as found in PAH, is thought to have molecular and genetic causes which lead to hypertrophy of smooth muscle, endothelial cells, and adventitia. In response to the increased resistance, the right ventricle will increase filling and stroke volume, which further increases pulmonary arterial pressure. Over time, right ventricular hypertrophy develops[1].

Chronic obstructive pulmonary disease (COPD) is a major cause of chronic morbidity and mortality throughout world. It is the fourth leading cause of death in the world and further increases its prevalence and mortality can be predicted in the coming decades. Pulmonary hypertension (PH) is a common and well established complication of COPD.

In a study by Sertogullarindan B, et al. has showed that frequency of pulmonary hypertension was 10.4% in patients with chronic obstructive pulmonary disease[7].

In a study by Gupta KK, et al. has showed that frequency of pulmonary hypertension was 62.4% in patients with chronic obstructive pulmonary disease[8].

Results of different studies on different population have shown huge variability of results as shown in above studies[7,8], therefore it's a dire need to get evidence in our local population. So I have planned to determine the frequency of pulmonary hypertension in patients with chronic obstructive pulmonary disease. Results of my study will estimate the real burden of this morbidity in our local population.

Methodology

This Cross Sectional Study was conducted in the Department of Pulmonology, Lady Reading Hospital, Peshawar from November 2020 to May 2021 with Non-probability consecutive sampling technique. Sample size was 144 sample size was calculated by using WHO sample size calculator with proportion (pulmonary hypertension) 10.4%7, with absolute precision 5% and confidence level = 95%. Inclusion Criteria: both male and

female gender of age 40-80 years with COPD as per operational definition for > 6 months. While patients having history of left heart failure, pulmonary embolus, lung cancer, sleep apnea and diabetes were excluded from this study.

DATA COLLECTION PROCEDURE:

144 patients fulfilling the inclusion criteria from Department of Pulmonology, LRH, Peshawar were included in the study after permission from ethical committee. Demographic information of patients (name, age, gender and weight on weighing machine) was taken. Informed consent was taken from each patient, ensuring confidentiality and fact that there is no risk involved to the patient while taking part in this study.

Echocardiography was performed by the same cardiologist (3 years of experience) using a Vivid 3 instrument (General Electric, US) and by utilizing a 2 MHz probe. The gradient between the right ventricular peak systolic pressure and right atrium pressure was measured by Doppler echocardiography at rest in cases with tricuspid insufficiency. The modified Bernoulli equation was used to calculate pulmonary artery pressure (PAP) pressure: PAP = 4 × (tricuspid systolic jet). The estimated systolic PAP (sPAP) was obtained by adding the right atrium mean pressure. When sPAP was more than 35 mm-Hg, the presence of pulmonary hypertension was established.

Results

Age range in this study was from 40 to 80 years with mean age of 60.944±7.50 years, mean duration of COPD was 10.625±3.21 months and mean weight was 82.493±8.47 Kg.

Male patients were 72.9% and females were 27.1%

Table- I: Frequency and %age of patients according to Pulmonary Hypertension

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Pulmonary Hypertension	Frequency	%age
Yes	15	10.4%
No	129	89.6%
Total	144	100%

Table-II: Pulmonary Hypertension with duration of COPD.

Duration of COPD (months)	Pulmonary Hypertension		p-value
	Yes	No	
6-12	0(0%)	103(100%)	0.000
>12	15(36.6%)	26(63.4%)	
Total	15(10.4%)	129(89.6%)	

Discussion

All cases were categorized as per GOLD guidelines9. On the basis of two-dimensional echocardiography based on Dana point European Society of Cardiology/European Respiratory Society guidelines10, the present study revealed the prevalence of PH in 10.4% cases. A previous study found 38.7% cases of PH in 31 patients of COPD11. Another study of 215 patients with severe COPD reported PH in 50.2% cases, including moderate PH in 9.8% cases and severe PH in 3.7% cases12. In a study by Sertogullarindan B, et al. has showed that frequency of pulmonary hypertension was 10.4% in patients with chronic obstructive pulmonary disease7. In a study by Gupta KK, et al. has showed that frequency of pulmonary hypertension was 62.4% in patients with chronic obstructive pulmonary disease8. The present study found increasing cardiovascular abnormalities with impairment of pulmonary functions (P < 0.001). Symptoms and signs of PH may be

difficult to recognize because they are nonspecific. Initially, patients present with exertional dyspnea and fatigue. Over the time, patients may eventually develop the signs and symptoms of severe PH with overt RV failure (e.g, exertional chest pain or syncope and congestion, including peripheral edema, ascites, and pleural effusion). The diagnosis is often delayed because the presenting features of PH are frequently attributed incorrectly to age, deconditioning, or a coexisting, or alternate medical condition. As a result, PH is often not suspected until symptoms become severe or serious. Nakatsuji et al. stated that the R wave amplitude and R/S ratio in the Syn-ECGs were significantly greater in patients with PH than in the controls ($P < 0.01$) while the R wave amplitude in the Syn-ECGs exhibited a significant and better correlation with the PASP than lead V113. There was statistically significant dilated PA or RA/RV enlargement in 81.8% of moderate and 100% of severe PH ($P < 0.001$). Patients of severe PH and Stage D COPD were failed to perform 6MWT. However, mean distance, DW, and PR-W showed a significant decline with increasing severity of PH and increasing stage of COPD. A significant increase in VAS was observed with increasing severity of PH ($P < 0.001$) and increasing Stages of COPD ($P < 0.001$). Durheim et al. reported that physical function declined over time in GOLD group D but remained stable in Groups A, B, and C. GOLD classification was associated with time to death or first COPD-related hospitalization. Baseline 6 min walk distance was more strongly associated with time to death or first COPD-related hospitalization (hazard ratio, 0.50 [95% confidence interval, 0.34–0.73] per 150 m, $P = 0.0003$) than GOLD 2011 classification14. With increasing severity of PH, a significant increase in RVSP, MPAP, RAP, and TR velocity was observed whereas with increasing severity, a significant decrease in mean TAPSE was observed ($P < 0.001$). None of the cases with normal PH had abnormalities such as RA enlargement, RV enlargement, small left chamber, IV flattening, pericardial effusion, and RV dysfunction. However, proportion of patients with these abnormalities was found to be significantly increasing with increasing severity of PH ($P < 0.001$). Mean RVSP, MPAP, RAP, and TR velocity was seen to be significantly higher in higher Stages (Stages C and D) as compared to lower stages (Stages A and B) ($P < 0.001$). The prevalence of abnormalities such as RA enlargement, RV enlargement, small left chamber, IV flattening, pericardial effusion, and RV dysfunction also showed a similar trend with higher prevalence in higher Stages of COPD as compared to lower Stages of COPD ($P < 0.001$). A study using echocardiographic evaluation of COPD had observed measurable TR in 27/40 (67.5%) cases and PH (defined as sPAP >30 mmHg) in 17/27 (63%) cases15. These findings support a previous study revealing SGRQ scores (total and domain) had been increased progressively for individual components with the decrease in airflow limitation (<0.05), body mass index (<0.002), and 6MWT (<0.05)16.

Another study reported a total of 1078 patients was included in the study, of whom 628 (58.3%) were male and 450 (41.7%) were female. The mean age of the patients undergoing the study was 70.1 ± 12.2. A total of 136 (13.7%) of them had mPAP (mm Hg) ≥ 40 mm Hg as severe pulmonary hypertension17.

Therefore, further studies involving larger sample size are needed to understand better clinical and biochemical profile of COPD patients.

Conclusion

The study concluded that PH is prevalent in advanced COPD and associated with a significant high risk for mortality and

morbidity. Our study put emphasis on early cardiac screening of all COPD patients which will be helpful in the assessment of prognosis, morbidity, and mortality.

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Awareness and Knowledge of Mothers coming to Obstetric and Gynae Wards of Allied Hospitals Regarding Family Planning and the Use of Contraceptive Methods

Abdur Rehman[1], Ahmed Hassan[2], Saad Asif[3] , Sumia Fatima[4], Maryam Mansoor[5], Zainab Idrees[6], Tayyaba Idrees[7], Mahin Fatima[8], Ayesha Zulfiqar[9], Tehseen Haider[10], Faizan Shahzad[11], Omaima Asif[12]

[1,2,3,4,5,6,7,8,9,10,11]Medical Students, Rawalpindi Medical University, Rawalpindi, Pakistan

[12]Department of Pharmacology, Rawalpindi Medical University, Rawalpindi, Pakistan

Author's Contribution

1,7,8,12 Conception of study
2,4,11 Experimentation/Study conduction
1,3,10 Analysis/Interpretation/Discussion
1,2,4 Manuscript Writing
4,5,9 Critical Review
3,5,6 Facilitation and Material analysis

Corresponding Author

Sumia Fatima[1]
Email:
sumiahfatima3@gmail.com

Tayyaba Idrees[1]
Email:
tayyabaidrees2608@gmail.com

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Abstract

Introduction: Family planning is defined by WHO as a way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes, and responsible decisions by individuals and couples, to promote the health and welfare of family groups and thus contribute effectively to the social development of a country. The concept of "family planning" is valuable as it improves health through adequate spacing of birth, avoiding pregnancy at high-risk, maternal age and high parity. Awareness among women should be created about their rights and opinions about the size of their family. There is a need to create awareness among males as well.

Aims and Objectives: To determine the level of knowledge of females towards family planning and use of contraceptive methods

Materials and Methods: A cross sectional study was conducted at the Allied hospitals of Rawalpindi medical University, i.e. Holy Family Hospital, Benazir Bhutto Hospital and District Headquarters Hospital from March 2022 to May 2022. Consecutive non random sampling technique was used. People were interviewed. Data was collected using a self-structured questionnaire. Data collected was analyzed using SPSS V 22.

Results: A total of 162 people were interviewed. Out of the total population, 50% (n=81/162) responded when asked whether pill protects against HIV with "Maybe", 38.3% responded with "No" and 11.7% responded with a "Yes". A majority of 52 %(n=85/162) also responded with a Maybe when asked whether pill protects against vaginal infections followed by 33.3% with "No" and 14.2% with "Yes". A majority of 32.1% (n=52/162) responded that the possibility of baby to become infected with HIV is also important to keep in mind while making the decision of whether or not to have a baby. A Majority of mothers 72.2% (n=117/162) also responded that their own health is the most important thing while making this decision.

Discussion and Conclusion: After we assessed the awareness and practice of mothers coming to obstetrics and gynecology wards of allied hospitals regarding family planning and the use of contraceptive methods; sadly the situation was so alarming that 54% of the mothers had never used any contraceptive technique. The data indicates a huge number of unplanned pregnancies and the overall situation is compounded by a cultural attitude of religious and medical superstition. To improve contraceptive use in Pakistan, multiple media sources should be used to educate the couples and their parents regarding contraceptive services, and strengthen the perception that religion not only allows but also recommends family planning.

MeSH Keywords: Mothers (D009035) Family Planning, Contraceptives, Knowledge

Introduction

Family planning is defined by WHO as a way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes, and responsible decisions by individuals and couples, to promote the health and welfare of family groups and thus contribute effectively to the social development of a country. [1] The integration of family planning is essential in the era of modern development to promote health. [1] Family planning refers to a conscious effort by a couple to limit or space the number of children they have through the use of contraceptive methods. It also deals with the reproductive health of a mother, prevents sexually transmitted diseases, and improves the life quality of the mother, fetus, and family as a whole. To reduce maternal mortality significantly, one of the initiatives is the provision of family planning and contraceptive methods at all levels of the healthcare system. [2]

Pakistan is the sixth most populous country in the world with a population exceeding 184M. Besides, it is also facing the challenges of poverty and limited access of the population to healthcare resources. Pakistan contributes to 50% of the maternal mortality rate worldwide. Pakistan Demographic and Health Survey (PDHS) 2006-7 indicates that the neonatal mortality rate (NMR) has remained virtually unchanged over the past 15 years [3]Twenty percent of married women of reproductive age in Pakistan have an unmet need for contraception while the country's contraceptive prevalence rate (CPR) is only 30%. [4]Social barriers that influenced the use of contraceptives include lack of knowledge, lack of motivation, husband/in-laws opposition, religious and cultural views, limited accessibility, and communication gap. [4] To improve contraceptive use in Pakistan, multiple media sources should be used to educate the couples and their parents regarding contraceptive services, and strengthen the perception that religion not only allows but also recommends family planning. Awareness among women should be created about their rights and opinions about the size of their family. There is a need to create awareness among males as well.[5]In one of the studies conducted in Sudan, the majority of the participants (87%) had good knowledge about family planning. A high level of awareness of 99% has also been reported in the Lahore study (Pakistan) and the Indian study revealed a knowledge rate of 82.2%. [6] The reasons for not using any family planning methods are religious beliefs and fear of side effects. A high level of public awareness and knowledge of family planning does not translate into an equivalent level of contraceptives. [7]The Pakistan Reproductive Health and Family Planning Survey highlighted the wide gap between knowledge (97%) and the use of contraceptives (28%) among currently married women. The majority of women know about the pill (68%) and IUCD (55%) but only 47% use some sort of contraception. [8]

Methodology

Study Design: Interview based Cross Sectional Analytical Study and Systemic Review

Study Setting: Holy Family Hospital, Benazir Bhutto Hospital and District Headquarters Hospital

Study Duration: March 2022 to May 2022

Study Population: Mothers coming to the gynae and obstetrics ward of Allied Hospitals of Rawalpindi

Inclusion criteria:
The women admitted to post natal wards of the respective hospitals, who had given birth in the last 7 days were included in the study

Exclusion criteria:
Women having a hearing disability, or language barrier (who spoke a language not understood by the interviewer) , or had suffered from severe complications during childbirth(like still birth, or post-partum hemorrhage), or were sleeping at the time of data collection were excluded from the study.

SAMPLE SIZE: The sample size was calculated to be 139 using the WHO calculator, with a confidence interval of 95%, an error rate of 5%, and a p value of 0.908, however we interviewed 162 women.

Sampling Technique:
Data was obtained by consecutive non-random sampling technique. The interviewers visited the wards on specific days, and obtained the data from all the patients present.

Data Collection Tool

Data was collected using a self-structured questionnaire, that was administered by one-on-one interviews. The questionnaire consisted of two components; the first one related to the demographics of the patient including their and their partner's age and educational status, and their family structure and dynamics.
The second part included questions that assessed their knowledge about modern contraceptive measures, focusing especially on the OCs, or Oral Contraceptive pills. We included questions about the common misconceptions regarding the OCs, like whether they cause obesity, their potential side effects, their concurrent usage with antibiotics, their protective role against HIV etc.

DATA ANALYSIS

The data was analyzed using SPSS v 22. Pearson's chi-square was applied to check the significance of the relation between the assessed variables

Results

The research was conducted among mothers among whom only 32.1% (n=52/162) had high school education, 22% (36/162) had Secondary level of education and 45.7% (74/162) had primary education or never attended school. Majority (93.2%, n=151/162) of them were house wives and lived in joint families (67.9%, n=110/162)

Majority of them (54.9%, n=89/162) were married between ages 18-22 and also became pregnant in this same age bracket (51.9%, n=84/162).

Thirty-two (32%, n=52/162) had 2 children, 19% 1 children followed by 18% 3 children and 13.6% 4 children.

When asked when you make the decision whether or not to have a baby (scaling between not important, less important, important, more important and very important)

How important is your family's desire, 43.2% (n=70/162) responded with very important followed by 28.4% (n=46/162) as important and only 6.2% (n=10/162) as not important

Majority 77.2% (n=125/162) responded that that most important is their partner's desire while making the decision whether or not to have a baby. Considerably 29% (n=47/162) responded that people's opinion are less important followed by 26.5% as totally not important (n=43/162).

Majority (32.1%, n=52/162) responded that the possibility of baby to become infected with HIV is also important to keep in mind while making the decision of whether or not to have a baby.

Majority of mothers (72.2%, n=117/162) also responded that their own health is the most important thing while making this decision

Summarized in Table 1

the following things

	Your Family's Desire For You to Have a Baby or Not (n=162)	Your Partner's Desire For You to Have a Baby or Not	Other People's Opinions For You to Have a Baby or Not	The Possibility for your Baby to Become Infected with HIV	Your Own Health
Not important	6.2%	.6%	26.5%	14.2%	.6%
Less important	8%	.6%	29%	10.5%	5.6%
Important	28.4%	4.3%	13%	27.8%	6.2%
More Important	14.2%	17.3%	8.6%	15.4%	15.4%
Very important	43.2%	77.2%	22.8%	32.1%	72.2%

KNOWLEDGE ABOUT CONTRACEPTIVE METHODS

When asked if they feel nauseous after taking the pill and then vomit, will they take another pill that day Majority (49.4%, n=80/162) responded with that they will not take the pill followed by 25.9% (n=42/162) with "Maybe" and 24.7% with "Yes". On inquiring if they start feeling migraine with aura, will they discontinue the pill, Majority (48.8%, n=79/162) responded with "Yes" they will discontinue taking the pill.

When asked whether they can take antibiotic with oral contraceptive pills, there were mixed answers with 35.8% responding with "No", 32.7& responding with "Maybe" and 31.5% responding with a "Yes".

Same was the case when asked whether the pills makes them fat, 41.4% responded with "Yes" and 38.9% responded with "No" followed by 19.8% with "Maybe"

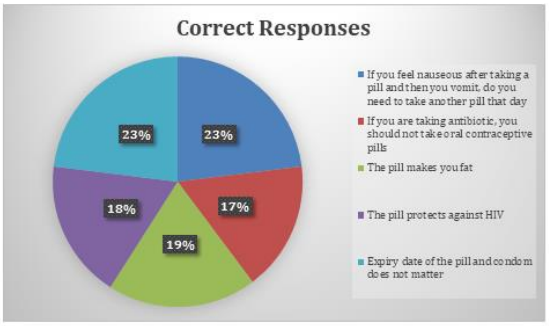
Majority (64.8%, n=105/162) responded that the pill prevents unintended pregnancy and that over-weight girls don't need to take two pills per day (57.4%, n=93/162),

Majority (49.4%, n=80/162) also were aware that the after the expiry date of the pills and condoms, they become useless.

There were mixed responses over questions, If they need an emergency pill, do they need to have a prescription, 39.5% (n=64/162) responded with "Yes", 39.5% responded with "No" and 21% responded with "Maybe"

Fifty percent 50% (n=81/162) responded when asked whether pill protects against HIV with "Maybe", 38.3% responded with "No" and 11.7% responded with a "Yes"

Majority (52%, n=85/162) also responded with a Maybe when asked whether pill protects against vaginal infections followed by 33.3% with "No" and 14.2% with "Yes"



Discussion

Pakistan is the fifth most heavily populated nation in the world having an estimated population of 212 million(9). With its already rotten governance system, crippled socioeconomic status and inadequate access to health services in both public and private sector; overpopulation acts as a breaking point when it comes to challenges that we face regarding maternal and child health(10). Therefore, family planning is an essential tool to regulate population growth and is imperative in reducing maternal and neonatal

mortality(11). This concept of "family planning" is valuable as it improves health through adequate spacing of birth, avoiding pregnancy at high-risk, maternal age and high parity(12).

Hence we set out to assess the general attitude and practice of mothers coming to obstetrics and gynecology wards of allied hospitals regarding family planning and the use of contraceptive methods; and sadly the situation was so alarming that 54% of the mothers had never used any contraceptive technique. On the contrary 18% were the ones who were currently using, 16% being the ones who had previously used and 12% who showed a positive inclination towards it but did not use any. The most common contraceptive method used are condoms (17.90%) followed by intrauterine device (5.60%). Oral contraceptive pills, natural rhythm and tubal ligation are equally opted as a choice (4.30%) whereas lactation, amenorrhea (3.10%) and early withdrawal from sex (2.50%) are relatively unpopular methods. In this study we found that majority of the mothers i.e. 93.2% were house wives and most of them 77.2% responded that the decision to have the baby lies with the father. It was also seen that 72.8% of the mothers had never received any information related to family planning. Even though majority 51.2% of the mothers did want to learn and use contraceptive techniques but most of them had not used any which was because of lack of information, apprehensions related to side effects and inability to make decision for themselves.

The situation is clarified greatly by a demographic bird's eye view; we find that minimal education, early marriages and joint family systems are a norm. All these factors drastically reduce the decision making capability of a potential mother, and very often she finds her life being steered by the family's will(10,13,14). The data indicates that the majority of women are not empowered enough to gain access to family planning procedures and hence greatly rely on their partners' and his family's support and consent(15). The data indicates a huge number of unplanned pregnancies and the overall situation is compounded by a cultural attitude of religious and medical superstition(16).

Attitude are not acquired by birth, they are learned and taken on by experiences and culturally gained during socialization. Therefore attitude towards family planning can only be reformed by continuous education by an expert in family planning(12). Our data indicates that attitude towards family planning depends upon the perception of the mother and family; if they understand and know the importance of it on maternal and neonatal health they are likely to use such birth spacing techniques. Therefore it is of utmost importance that mothers and their families are given awareness and information related to the benefits of family planning, and health professionals should try their best to erase any cultural, religious and medical misconceptions they have regarding such methods(17)

So in order to eradicate this predicament from our society we need to make countless efforts to inculcate and modify people attitude towards family planning as it is need of the day.

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Cross Sectional Study on Tuberculosis Awareness and Prevention in Allied Hospitals of Rawalpindi

Sumia Fatima[1], Maryam Mansoor[2], Zainab Idrees[3], Tayyaba Idrees[4], Mahin Fatima[5], Ayesha Zulfiqar[6], Abdur Rehman[7], Ahmed Hassan[8], Saad Asif[9], Tehseen Haider[10], Faizan Shahzad[11], Omaima Asif[12]

[1,2,3,4,5,6,7,8,9,10,11]Medical Students, Rawalpindi Medical University, Rawalpindi, Pakistan

[12]Department of Pharmacology, Rawalpindi Medical University, Rawalpindi, Pakistan

Author's Contribution

1,7,8,12 Conception of study
2,4,11 Experimentation/Study conduction
1,3,10 Analysis/Interpretation/Discussion
1,2,4 Manuscript Writing
4,5,9 Critical Review
3,5,6 Facilitation and Material analysis

Corresponding Author

Sumia Fatima[1]
Email:
sumiahfatima3@gmail.com

Tayyaba Idrees[1]
Email:
tayyabaidrees2608@gmail.com

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Abstract

Introduction: Tuberculosis is a widespread disease that affects millions of people and ranks as the second leading cause of death by an infectious disease. TB is a contagious disease that is caused by the bacteria Mycobacterium tuberculosis. Ending the TB epidemic by 2030 is one of the sustainable development goals and countries with high prevalence rates are not on track to meet these goals.

Objectives:

1. To determine the level of knowledge of general public towards tuberculosis
2. To assess the attitude and practice of general population towards prevention of tuberculosis

Material and Methods: A descriptive cross-sectional survey based study was conducted in the Allied hospitals of Rawalpindi medical university during March 2022.Non-random consecutive sampling technique was used. People were interviewed. A standardized self-structured questionnaire was used. Data collected was analyzed using the latest version of SPSS.

Results: A total of 296 people were interviewed. Out of the total population, 109(36.8%) respondents knew that tuberculosis is a bacterial disease. 23(7.8%) Respondents have no definite knowledge about the prevention of Tuberculosis. 282(95.3%) were willing to visit a hospital if they developed Tuberculosis.

Discussions and Conclusions: The study suggests that we have come a long way in prevention and treatment on TB but we still have many more miles to go. It implies the urgent need to amplify the efforts to further improve the awareness of the populace about the symptoms and prevention of the disease. An increase in monitoring the vaccination program is needed, to ensure prevention of TB at grassroots level.

MeSH Keywords: Tuberculosis, Awareness, Prevention

Introduction

Tuberculosis (TB) one of the most evident public health problems is a contagious disease that is caused by the bacteria Mycobacterium tuberculosis (1). This bacteria usually attacks the lungs but it can affect any part of the body. Signs and symptoms depend on the site of the body affected. Usually it presents with a cough for more than 3 weeks, fever with chills, night sweating, loss of appetite, fatigue, and in worst cases blood in sputum with chest pain. (2)

Tuberculosis is a widespread disease that affects millions of people and ranks as the second leading cause of death by an infectious disease. Globally, 9.7 million people get sick with tuberculosis (TB) and 1.7 million people die from it, each year (3). Furthermore Pakistan ranks 5th among the 22 countries with the highest burden of tuberculosis (TB) and 27 high multidrug resistant (MDR) TB countries of the world, and it contributes about 60% of the total TB burden in the Eastern Mediterranean Region. Approximately 510,000 new cases occur every year in the country(4). Reason for such high prevalence is that this disease is primarily of the poor. People who have poor living conditions tend to have less knowledge and awareness regarding the disease that results in delayed health care seeking and subsequently increased transmission and poor treatment outcomes(5).Pakistan being a poor socioeconomic state(6) suffers atrociously from this condition.

Ending the TB epidemic by 2030 is one of the sustainable development goals and countries with high prevalence rates are not on track to meet these goals (7). Raising community awareness contributes to early diagnosis of TB which is one of the pillars of the End TB Strategy. It is seen that knowledge, attitude and practice of the general population with respect to Tuberculosis plays a very important role in early prevention, diagnosis and treatment(8). It is for this reason that effective community engagement including advocacy, communication and social mobilization activities (ACSM) is an essential component of the 2nd pillar of the World Health Organization's End TB strategy(9). Keeping all these things in mind we set out to find the level of knowledge, attitude and practice among the general population towards tuberculosis as these factors play a very major role in prevention of disease progression.

Methodology

Study design:

The study regarding knowledge, attitude, and practice considering tuberculosis in the general public of Rawalpindi is a descriptive cross sectional survey based study conducted in the Allied hospitals of Rawalpindi medical university during March 2022.

Study population:

The population under study was the general public visiting the allied hospitals of RMU.

Sampling technique:

Sample technique used was non-random consecutive sampling.

Sample size:

Sample size was calculated using WHO calculator with a population proportion of 82% and CI of 95%. It came out to be 227.

A total of 296 responses were collected in 14 days.

Students visited the hospitals daily and interviewed the participants for 2 weeks.

Inclusion criteria:

General public visiting the allied hospitals of RMU.

Exclusion criteria:

People who were not willing to participate and experienced a language barrier.

Data collection tool:

Data collection tool was a standardized self-structured questionnaire that consisted of questions about demographic details, symptomatology, and routes of spread of disease, methods of prevention and treatment options. Last portion assessed the attitude and practice of people towards tuberculosis.

Consent was obtained from every person and confidentiality was maintained.

Responses were collected utilizing interview based techniques.

People participating were explained about the aim and objectives of the study.

DATA ANALYSIS

Data collected was analyzed using the latest version of SPSS

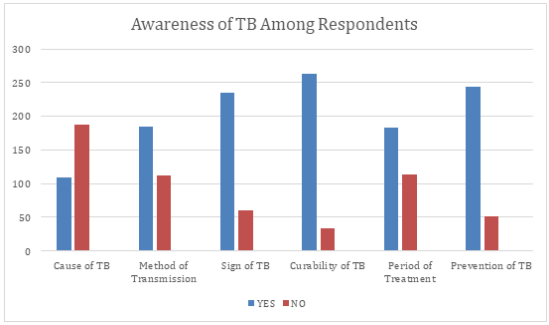
Observations and Results

A total of 296 people were interviewed, out of whom 166 (56%) were females and 130 (44%) were males. Of them, 46% were single and 54% of them were married. Of the respondents 69.6% of people belong to Urban households while 30.4% were living in Rural areas. The educational status among the subjects were classified into seven categories being illiterate (11%) and others having primary(9%), secondary(5.4%), matric(20%), intermediate(21.3%), graduation(27%) and post-graduation(6.4%) level of education. The current Occupational status of respondents were Students(30.7%),Unemployed(5.1%),House wives(27%),Labors(11.8%), Private Employee(7.4%),Government Employee(3.7%),Businessman(4.4%),Professionals(9.5%).

A total of 23(7.8%) respondents were diagnosed with TB in past, while 102(34.5%) respondents were having a family history of Tuberculosis.

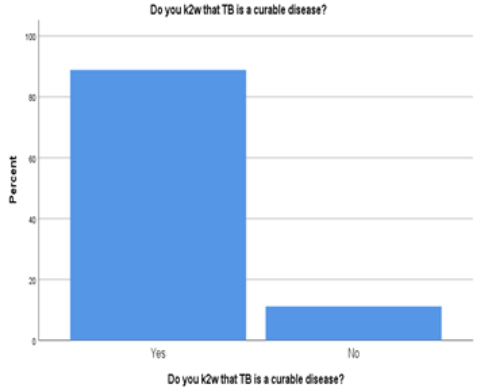
Awareness about TB and its prevention

A total number of 109(36.8%) respondents knew that tuberculosis is a bacterial disease while 184(62%) respondents are aware of it being transferred by air droplets. Regarding the symptoms 235(79%) were aware that cough is a sign of Tuberculosis. Of the respondents 263(88.9%) knew that TB is a curable disease. Regarding the period of treatment 183(62%) were aware of Six to nine month time span of Tuberculosis Treatment. 244(82.4%) Respondents have knowledge that Tuberculosis is Preventable disease.



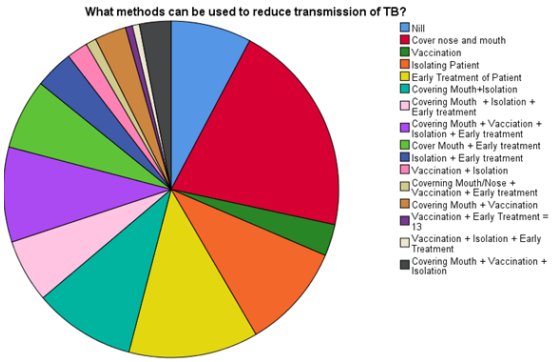
There is no significant difference in the knowledge of awareness regarding Cause of TB (P value = 0.095), Period of Treatment of TB (P value=0.292),Mode of transmission of TB (P value= 0.059), Knowledge of Cure (P value=0.575),Prevention(P value=0.330) of the disease Among Males and Females. However there is a significance difference in knowledge of symptoms of Tuberculosis as Cough between Male and Female(P value=0.037) with Male Respondent having

knowledge of cough as a symptom of Tuberculosis.



Knowledge, Attitude and Practice	Male N=130	Female N=166	P value (Asymptomatic significance)
Do you know the cause of TB? (Bacteria)	41	68	0.095
Do you know period of treatment of TB?	76	107	0.292
Do you know the transmission of TB? (air borne droplets)	73	111	0.059
Do you know that cough is a symptom of TB?	96	139	0.037
Do you know TB is curable disease?	114	149	0.575
Do you know TB is preventable	104	140	0.330

Regarding the prevention of Tuberculosis , 23(7.8%) Respondents have no definite knowledge about the prevention of Tuberculosis. Of the remaining respondents Various categories were obtained in which Respondent believes TB can be prevented by Covering nose and mouth 61(20.6%), Vaccination 09(3%), Isolating Patient 30(10.1%), Early Treatment of Patient 37(12.5%), Covering nose and mouth with isolation of patient 29(9.8%), Covering nose and mouth with isolation along with early treatment 18(6.1%), Covering nose and mouth with isolation vaccination and early treatment 27(9.1%), Covering nose and mouth and early treatment 20(6.8%), Isolation and Early Treatment 11(3.7%), Vaccination and Isolation 06(2%), Covering nose and mouth with vaccination and early Treatment 03(1%), Covering nose and mouth and vaccination 09(3%), Vaccination isolation and early Treatment 02(0.7%), Vaccination and Early Treatment 02(0.7%), Covering nose and mouth with isolation and vaccination 09(3%).



Regarding the Source of Information for Awareness of Tuberculosis , 16(5.4%) respondents have no definite source of knowledge about the prevention of Tuberculosis. Of the remaining respondents Various categories were obtained in which Respondent got information and awareness about TB from Newspaper/Radio/Television 56(18.9%), TB Patient 31(10.5%), Health Insurance School 44(14.9%), Family 46(15.5%), Multiple Sources 67(22.6%), Newspaper and Family 04(1.4%), Newspaper and TB Patient 05(1.7%), TB Patient and Health institute 06(2%), TB Patient and Family 06(2%),Newspaper ,TB Patient , Health institute, Multiple sources and Family 03(1%), health institute and Multiple sources 03(1%).

Source of information:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nill	16	5.4	5.4	5.4
	Newspaper Radio/TV	56	18.9	18.9	24.3
	TB patient	31	10.5	10.5	34.8
	Health Institue School	44	14.9	14.9	49.7
	Family	46	15.5	15.5	65.2
	Multiple sources	67	22.6	22.6	87.8
	Newspaper + Family	4	1.4	1.4	89.2
	Newspaper + TB patient	5	1.7	1.7	90.9
	Health institute + Multiple source	2	.7	.7	91.6
	TB patient + Health institute	6	2.0	2.0	93.6
	TB Patient + Family	6	2.0	2.0	95.6
	TB patient + Multiple sources	2	.7	.7	96.3
	Newspaper + TB patient + Health Institute + Family + Multiple sources	3	1.0	1.0	97.3
	Newspaper + Multiple Sources	2	.7	.7	98.0
	Newspaper + Health institute + Multiple source	3	1.0	1.0	99.0
	School + Family	1	.3	.3	99.3
	Newspaper + Family + Multiple sources	1	.3	.3	99.7
	Newspaper + TB patient + Multiple sources	1	.3	.3	100.0
	Total	296	100.0	100.0	

Attitude toward Tuberculosis

Of the respondents, 114(38.5%) were afraid of a TB Patient, and 61(20.6) aren't willing to continue Friendship with a TB Patient. 267(90.2%) Respondents were willing to provide care for a TB Patient and 210(70.9%) think it is safe to get their children marry a cured TB Patient. Regarding personal care 264(89.2%) Respondents were willing to inform other people in case they develop Tuberculosis.

Practice toward prevention of tuberculosis

Of the respondent, 282(95.3%) were willing to visit a hospital if they developed Tuberculosis. Regarding BCG Vaccination 224(75.7%) respondents said that they have their kids vaccinated against TB. Of the respondents, 282(95.3%) respondents were maintaining proper hygiene at home. 271(91.6%) respondents have adequately ventilated house and 275(92.9%) believe that Nutritional diet plays an important role in Tuberculosis Management. Of the respondents, 255(86.1%) were willing to maintain proper isolation if they developed Tuberculosis.

Discussion

Pakistan carries the 5th greatest burden of TB worldwide(10),and thus, we need to ramp up our efforts to eradicate it from our society. Being a developing country, lower standards of living and low literacy levels have proved to be the greatest hurdles towards the attainment of this goal(11). However, the continued efforts of the past many years have started to bear fruit, which was also reflected in our study. The level of knowledge of mode of transmission, treatment period, prevention, and cure of TB was same in males and females according to our study, whereas, previously, men have been found to be better educated about the features of the disease(12)(13)(14). However, regarding cough being the chief complaint of TB, men were better informed. This indicates a need to educate women better about the symptomatology of the disease, because they are the primary caregivers in the household, and an inadequacy in their knowledge can predispose the whole family to TB.

Only 36% were aware of bacterial etiology of the disease. This knowledge, however, is not a very essential requirement for prevention and treatment, so this deficiency can be overlooked.

Regarding the prevention and cure, a great majority of the participants were aware that TB is preventable and completely curable. However, when asked about the methods to prevent the spread of the disease, around 20% deemed it enough that the nose and mouth be covered, 10% considered isolating the patient to be sufficient, and whereas 12% thought

that the most important step was early diagnosis and treatment of the patient. Majority, however, was in favor of taking multiple measures, like concurrent isolation, early diagnosis and treatment and vaccination. This shows that the awareness campaigns have been largely successful in teaching the people about the preventability and curability of the disease. However, more efforts are needed if eradication of TB from the society is to be achieved.

Majority of the participants attributed their knowledge of TB to multiple sources; electronic and print media, TB patients, healthcare institutes and family. The greatest role in awareness was, however, played by the media; electronic and print. Presence of television in houses in urban areas and radio in rural areas has been found to be associated with better awareness regarding TB(15)(16)(17). This goes to show the efficiency of awareness programs projected via the media, and implies the urgent need to amplify these efforts to further improve the awareness of the populace about the symptoms and prevention of the disease.

Regarding the attitude towards the patients of tuberculosis, most of the study participants showed a positive approach. They were not daunted by the prospect of contracting the disease, nor were they willing to cut off ties just because of TB. 90% responded that they would be even willing to care for their relatives who develop tuberculosis, which indicates an important milestone achieved regarding negating the psychosocial stigmata associated with TB. 90% also said that in the unfortunate event of them developing TB, they would caution others against maintaining close contact with them. This shows a greater acceptance rate of TB into our society, as the knowledge about curability and preventability of TB has remarkably reduce the onus associated with being a TB patient.

As far as practices toward prevention are concerned, we found an overwhelmingly positive response in the majority of the respects. Over 90% of the people had maintained proper hygiene, adequately ventilated houses, and were aware of the important role proper nutrition plays in the prevention of the disease, which is similar to other studies performed in Pakistan(17) However, only 85% responded that they would maintain isolation were they infected. The most common reason for that was found out to be large families living in small homes, making effective isolation nigh impossible. In addition, only 75% of the respondents had their kids vaccinated against TB. The possible reasons for this data could be inadequate knowledge of the parents about the vaccination process, or wealth and social inequalities (18). This demands an increase in monitoring the vaccination program, to ensure prevention of TB at grassroots level.

TB does not end with the conclusion of its treatment. The consequences of the disease seriously affect the quality of life of the patient, sometimes with even recurrence in the advanced years. A study shows that post-TB, more than 84% of the patients develop radiological sequelae, with pulmonary fibrosis being the chief complaint(19). A bidirectional correlation between tuberculosis and diabetes mellitus has also been found, which prompts the need of regular screening of TB patients for Diabetes Mellitus ,and vice versa (20). The increasing prevalence of MDR TB is also a cause of alarm, and adequate awareness is direly needed, as even university students, who belong to the better educated faction of the

society, do not have sufficient knowledge about multidrug resistance TB, and its treatment strategies. (21)

In short, we have come a long way in prevention and treatment on TB (22), but we still have many more miles to go.

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Attitude of Females Coming to Obstetric And Gynae Wards of Allied Hospitals Regarding Family Planning and The Use of Contraceptive Methods

Abdur Rehman[1], Ahmed Hassan[2], Saad Asif[3] , Sumia Fatima[4], Maryam Mansoor[5], Zainab Idrees[6], Tayyaba Idrees[7], Mahin Fatima[8], Ayesha Zulfiqar[9], Tehseen Haider[10], Faizan Shahzad[11], Omaima Asif[12]

[1,2,3,4,5,6,7,8,9,10,11]Medical Students, Rawalpindi Medical University, Rawalpindi, Pakistan

[12]Department of Pharmacology, Rawalpindi Medical University, Rawalpindi, Pakistan

Author's Contribution

1,7,8,12 Conception of study
2,4,11 Experimentation/Study conduction
1,3,10 Analysis/Interpretation/Discussion
1,2,4 Manuscript Writing
4,5,9 Critical Review
3,5,6 Facilitation and Material analysis

Corresponding Author

Sumia Fatima[1]
Email:
sumiahfatima3@gmail.com

Tayyaba Idrees[1]
Email:
tayyabaidrees2608@gmail.com

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Abstract

Introduction: Family planning is a mutual commitment, it is meant that the men's participation in family planning should not be limited to the usage of condoms, but it is meant to allow their wives to use contraceptive methods too. Awareness regarding birth spacing is low in underdeveloped countries. Unwanted pregnancy and birth rates remain high. The actual need is to enhance contraceptive practice in our region.

Aims and Objectives:

- To measure the Usage and the Attitude of females regarding family planning and contraceptive methods

Material and Methods: An Interview based Cross-Sectional Analytical Study and Systemic Review was conducted in Holy Family Hospital, Benazir Bhutto Hospital, and District Headquarters Hospital from March 2022 to May 2022. The consecutive Sampling technique was used. A self-structured questionnaire was used. Data collected was analyzed using SPSS v22.

Results: A total of 162 people were interviewed. Out of the total population, the majority 48.1% (n=78/162) responded that they will try to obtain a family planning method even if they have to wait in long lines. 36.4% responded in the negative and 15.4% responded with "Maybe". The majority 72.8% (n=118/162) responded that they will discuss family planning methods with their husband also responded (73.5%, n=119/162) that they will not use a family planning method if they have not discussed it with their husbands.

Discussion and Conclusion: According to our study, the majority of females deemed their decision about having a baby either important or very important (n=80/162). But still, the most important determinant for a female to have a baby or not was their male counterpart's desire with 77.2% of respondents considering it the most important single factor and this observation in our study corroborates existing literature. A judicious and planned use of resources to disseminate the message of family planning through print and electronic media, education of masses about their sexual health, and opening of more and more family planning centers with trained staff and better facilities could all be beneficial to maternal health, child health, and population exploding issues of third world countries like Pakistan.

MeSH Keywords: Mothers (D009035) Family Planning, Contraceptives, Knowledge

Introduction

Pakistan is the sixth most populous country with an annual growth rate of 2.1% [24] . Efforts expand access to reproductive health care in Pakistan date back to the 1950s. The fertility rate in Pakistan has declined at a much slower pace compared to that in neighboring countries. [28]

The Pakistan Reproductive Health and Family Planning Survey highlighted the gap between knowledge (97%) and the use of contraceptives (28%) among currently married women. Birth spacing has several advantages. It improves the health of the mother and puts less pressure on the financial status of the family. [24]

Pakistan has the highest unmet needs for postpartum family planning among low- and middle-income countries. [26]

An increase in contraception usage in developing countries has shown a decrease in maternal mortality by 40% over the past 20 years, as published by lancet in 2012. [28]

Having a large family that will be dependent on one person is one of the major worries of the poor. It is also seen that opinions of women regarding family planning are not taken into consideration. Communication between the spouses on the matter of family planning is vital in having a prosperous family and individual life. Family planning is a mutual commitment, it is meant that the men's participation in family planning should not be limited to the usage of condoms, but it is meant to allow their wives to use contraceptive methods too. [25]

The population growth of Pakistan is increasing drastically and has reached 3% per year which is eating away at the economic gain of the country. [25] More than 50% of the estimated 303,000 annual maternal deaths globally occur in six developing countries, including Pakistan. Efforts to decrease the maternal mortality rate have gained momentum in the world. Various studies show that short birth intervals increase the risk of maternal, newborn, infant, and under-5 mortality. Family planning is a proven and cost-effective way to prevent both maternal and infant mortality. [26]

The maternal mortality rate in Pakistan remains high at 276 per 100,000 live births. Only 26% of ever-married women use a modern family planning method despite there being universal awareness of family planning. About 37% of them discontinue use within 12 months.

Various reasons for method discontinuation include experiencing side effects, health concerns, unavailability of the method, and lack of access to health services. [26]

A number for family planning are available for couples. [25] Among these, tubal ligation is the most common method typically acquired at a late age, after about 31.5 years. [29]

The usage of family planning in rural areas of Pakistan is only 31%, and in urban areas, it is 45%. , Collectively, the usage of modern family planning methods in Pakistan accounts for only 26% of the population. [29]

However, the influence of husbands and mothers-in-law, inadequate counseling skills, insufficient training for service providers, weak supportive supervision, and interrupted supply of contraceptives is shaping the decision and practice of family planning. [28]

Awareness regarding birth spacing is low in underdeveloped countries. Unwanted pregnancy and birth rates remain high. The actual need is to enhance contraceptive practice in our region. [24] The total fertility rate in Pakistan is about 3.8 which adversely impacts the lives of women and children. The rural residents experience significant impediments in gaining access to health services, including FP provided by the public and private sectors. Lack of financial resources at the individual level can be a major impediment to acquiring FP services. [27]

Methodology

Study Setting:

A cross-sectional descriptive study was conducted at the post-natal wards of allied hospitals of Rawalpindi medical University i.e. Holy Family Hospital, District Headquarter Hospital, and Benazir Bhutto Hospital.

Study Population:

Data was collected from post-partum females admitted to the post-natal wards of allied hospitals. Females admitted in the wards who had had a delivery in the last 7 days were included in the study. Those who could not understand Urdu or had not had a live birth were excluded from the study.

Study Duration:

The study was conducted from March 2022 to May 2022

Sampling Technique:

Consecutive sampling

Sample Size:

The sample size was calculated to be 139, using a confidence interval of 95%, confidence level of 5%, and p-value of 0.9 using WHO calculator, however, we obtained the data from 162 mothers. We used consecutive, non-random sampling technique to obtain the data.

Data Collection Tool:

Data was collected using self-structured questionnaires, which were administered by one-on-one interviews, considering the delicate nature of the questions. Informed consent was obtained prior to data collection.

The questionnaire consisted of two parts, the first being related to demographics, which included the age and educational status of both partners, their financial status, and the family structure and dynamics , i.e. who carried the most weight regarding making the decisions regarding childbirth etc.

The second one contained questions about the major contraceptive measures employed and how they got to know about them, the factors that can affect the decision to have a child, the role and attitude of their partner regarding family planning, ideal family size, and major obstructions to using Contraception.

Inclusion Criteria: Married females of reproductive age coming to the gynae and obstetrics ward of Allied Hospitals.

Exclusion Criteria: Mothers with hearing and listening disabilities also those who were unapproachable due to language barriers (not speak Urdu or English or Punjabi) those not consenting to give an interview.

DATA ANALYSIS

The data was analyzed using SPSS v 22. Pearson's chi-square was applied to check the significance of the relation between the assessed variables.

Observations and Results

The research was conducted among mothers among whom only 32.1% (n=52/162) had high school education, 22% (36/162) had Secondary level of education and 45.7% (74/162) had primary education or never attended school. The majority (93.2%, n=151/162) of them were housewives and lived in joint families (67.9%, n=110/162)

The majority of them (54.9%, n=89/162) were married between the ages of 18-22 and also became pregnant in this same age bracket (51.9%, n=84/162).

Thirty-two (32%, n=52/162) had 2 children, 19% 1 children followed by 18% 3 children and 13.6% 4 children.

When asked when you decide whether or not to have a baby (scaling between not important, less important, important, more important, and very important)

How important is your family's desire, 43.2% (n=70/162) responded with very important followed by 28.4% (n=46/162) as important and only 6.2% (n=10/162) as not important

The majority 77.2% (n=125/162) responded that the most important is their partner's desire while deciding whether or not to have a baby. Considerably 29% (n=47/162) responded that people's opinions are less important followed by 26.5% as totally not important (n=43/162).

The majority (32.1%, n=52/162) responded that the possibility of the becoming infected with HIV is also important to keep in mind while deciding whether or not to have a baby.

The majority of mothers (72.2%, n=117/162) also responded that thown health is the most important thing when making this decision

Summarized in Table 1

Table: 1 when you decide whether or not to have a baby, how important are the following things

	Your Family's Desire For You to Have a Baby or Not (n=162)	Your Partner's Desire For You to Have a Baby or Not	Other People's Opinions For You to Have a Baby or Not	The Possibility of your Baby to Become Infected with HIV	Your Health
Not important	6.2%	.6%	26.5%	14.2%	.6%
Less important	8%	.6%	29%	10.5%	5.6%
Important	28.4%	4.3%	13%	27.8%	6.2%
More Important	14.2%	17.3%	8.6%	15.4%	15.4%
Very important	43.2%	77.2%	22.8%	32.1%	72.2%

Attitude about Family planning and Contraceptive Methods

The majority 51.2% (n=82/162) responded that they will find it easy to obtain information about different kinds of methods from health care providers whereas 30.2% responded with a "No' and 18.5% with "Maybe".

Sixty-eight (68.5%, n=111/162) percent responded that they will discuss with their husband how many children they want and 24.7% responded that they will not and 6.8% responded with "Maybe".

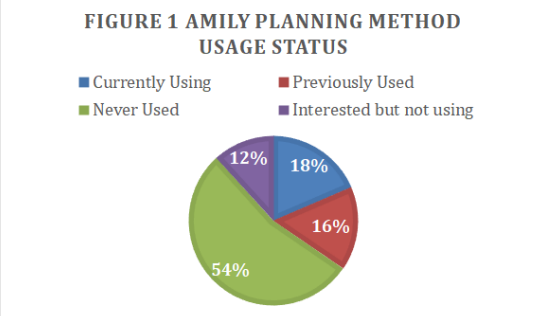
The majority 48.1% (n=78/162) responded that they will try to obtain a family planning method even if they have to wait in long lines. 36.4% responded in the negative and 15.4% responded with "Maybe"

The majority 72.8% (n=118/162) responded that they will discuss family planning methods with their husband also responded (73.5%, n=119/162) that they will not use a family planning method if they have not discussed it with their husbands. But in regards to mother in law, 48.8% responded that they will continue using the family planning method even if the mother in law

does not want to, 35.8% responded with "No' and 15.4% responded with "Maybe"

Sixty-one percent of the mothers also responded that they will not use a family planning method if they are afraid of side effects, 23.5% responded that they will continue using the family planning method even if they are afraid of side effects and 15.4% responded with "Maybe".

A great number of mothers (53.7%, n=87/162) responded that they have never used a family planning method shown in Figure 1

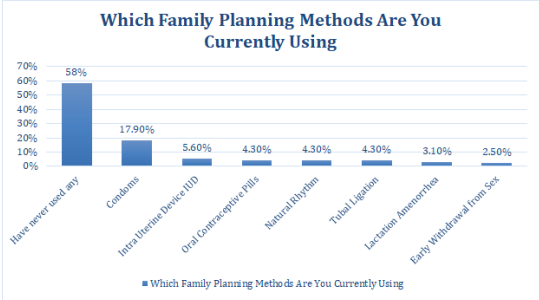


The majority (72.8%, n=118/162) responded that they have never received any information about family planning from the hospital before, and 27.1% responded that they have received it.

When asked about which family planning methods are they currently using, the responses were: Eighty percent (80.9%, n=131/162) responded that they want family planning talked about in the clinic and they also responded that their desired family size is less than 4.

When asked about unplanned pregnancy, 51.9% responded that they never had an unplanned pregnancy, and 48.1% responded with "Yes" they had.

A huge number 96.9% (n=157/162) responded that they did not take the pill before the first sexual intercourse.



Discussion

Population control and suitable family planning have been long-standing issues for Pakistan reflected in the fact that Pakistan is the 5th most populous country in the world1. Family planning has also been deemed important for maternal and child health alongside the economic situation of the family. According to the Annual Contraceptive Performance Report, 2019-20 contraceptive use has been following a down-curve that is attributed partly to the COVID-19 pandemic and its effect on the delivery of Family Planning Program Services2. Majority of the population in our study consisted of a minimally literate females mostly those who had primary or high school education with a cumulative percentage of 77.7%, living in joint families (67.9%, n=110/162) and were housewives (93.2%, n=151/162). Most of the respondents were multiparous and married at the age of 18-22 years (54.9%, n=89/162) with marrying age overlapping their first pregnancy (51.9%, n=84/162).

According to our study, the majority of females deemed their decision about having a baby either important or very important (n=80/162). But still, the most important determinant for a female to have a baby or not

was their male counterpart's desire with 77.2% of respondents considering it the most important single factor and this observation in our study corroborates existing literature 3 4 5. It could be understood when we view the Pakistani society as being predominantly a patriarchic society6 complicated by cultural taboos that are paved upon the male decision as only and final word for wife. Muhammad Masood Kadir et al., 2018 observed that in the majority of families in Pakistan, the male family member has the most significant say about a number of several other matters regarding family planning7.

In our study, almost one third respondent thought it important to keep in mind the risk of infecting a newborns with HIV and newborns two-thirds responded that their health takes precedence over having a baby. Multiple studies endorse that female health is taken into consideration before planning a pregnancy 8 9 10. Ayesha Khan (1999) observed that females thought their health needs important so that they would be able to have healthy children and take care of their family properly. Most studies have found that in Pakistan, the method of HIV transmission and prevention is little known among females of reproductive age 11. Attitude and knowledge about HIV among females of reproductive age in Pakistan is comparatively low as compared to other countries such as South Africa (61.7%), Tanzania (50%), Northwest Ethiopia (42.5%), Nigeria (25.5%), Ghana (12.3%) and Gondar (11.5%)12. However, the respondent were aware of the fact that contraceptive pill have no effect on prevention, treatment of HIV If partners are more supportive, women are more comfortable to explore taboo subjects such as HIV and keep their health priorities ahead of societal opinions.13

In our study majority of respondent considered discontinuing contraceptive use temporarily if they experienced side effects. This could be attributed to lack of awareness about contraceptive method side effects. According to existing literature, side effects of contraceptive has been regarded as a major contributor to early discontinuation and poor compliance 14 15. One of the side effects particularly explored in our study was increase in weight with contraception use and a slight majority responded with a positive connection amongst weight gain and contraception use. Existing literature is disputed amongst link between contraceptive use and female weight gain. Weight gain during traditional oral contraceptive and HRT use has been one of the main reasons for poor compliance and discontinuation16 17. Health care provider should discuss transient nature of these side effects to improve compliance and use for contraceptive methods18. A better acceptance of contraceptive use can be achieved by a thorough explanation of side effects by health care professional and vendors19.

Most of respondents were unaware of the fact that obese females need a higher and continuous contraceptive dose for desired effects. There was also comparatively lack of awareness on the need for a prescription for emergency contraception pills that are available over-the-counter for use. However, they knew that they could control undesired pregnancies with contraceptive method and that after expiry date has passed, contraceptive method should not be used as that is detrimental to health. Moreover, there is lack of knowledge on use of antibiotics alongside contraception pill. This issue can be resolved by a female through a visit to health care profession or family planning centers with a thorough history of medication

so that the health care provider can deduce from history whether or not to use contraceptive pill and antibiotics together. All these issues could be resolved by a better training of family planning center staff alongside opening more centers in different localities making the availability of family planning resources easier for general population. Print and electronic media can also be used to debunk the myths and disseminate the facts and benefits about contraceptive methods

An alarming observation in our study is that majority of the respondent were unaware of the contraceptive methods beneficial effects in preventing STDs such as vaginal infections and HIV. Existing literature has been pointing to same observation for long time now20 21 22. The factors that could be attributed to lack of awareness about STDs and their prevention in Pakistan, is it being a conservative society with these topics considered as taboo and are not discussed even with a health expert due to cultural, social and religious constraints.23 This is an issue that should be addressed on emergency basis to reduce the risk of sexual transmitted diseases amongst females and from mother to child by careful planning and dissemination of information in a sensible and effective manner that is within acceptable bounds of society and culture of country. A judicious and planned use of resources to disseminate the message of family planning through print and electronic media, education of masses about their sexual health and opening more and more family planning centers with trained staff and better facilities could all be beneficial to maternal health, child health and population exploding issues of third world countries like Pakistan.

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Role of Pre-Operative Dexamethasone As Prophylaxis For Post-Operative Nausea And Vomiting In Laparoscopic Cholecystectomy

Samra Riaz [1], Saadia Zulfiqar[2], Malik Irfan Ahmad[3], Naveed Malik[4], Munema Khan[5]

[1]Senior Registrar, General Surgery, DHQ Rawalpindi
[2]Surgical Registrar, Pricness Royal Hospital, Kings College
[3]Senior Registrar, General Surgery, DHQ Rawalpindi
[4]Head of Department General Surgery, DHQ Rawalpindi
[5]Resident General Surgery, DHQ Rawalpindi

Author's Contribution

1 Conception of study
2,4 Experimentation/Study conduction
1,3 Analysis/Interpretation/Discussion
1,2,4 Manuscript Writing
4,5 Critical Review
3,5,6 Facilitation and Material analysis

Corresponding Author

Munema Khan,
Post graduate Resident,
Department of General Surgery,
District headquarters Hospital,
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Abstract

4. Objective: To assess the role of preoperative dexamethasone in preventing post-operative nausea & vomiting (PONV) in patients undergoing laparoscopic cholecystectomy.
5. Methodology: This study was a Randomized controlled, double-blinded trial which was conducted at Department of Surgery—removed for blind review---. 60 adult patients aged 18-60 with ASA grade I-II were included. All Laparoscopic Cholecystectomies were performed by Consultants (Senior Registrar & above).
6. Results: 60% (n=18) of patients in experimental-group and 36.67% (n=11) in control-group were in 18-40 age group while 40% (n=12) in former and 63.33% (n=19) in latter were in 41-60 age-group. Mean ± Standard Deviation was calculated as 37.63 ± 9.29 and 42.5 ± 8.20 years respectively. Comparison of frequency of PONV within first 24-hours in patients receiving preoperative 8mg Dexamethasone and placebo was evaluated. A frequency of 26.67% (n=8) was noted in experimental group and 66.67% (n=20) in control group. P-value was calculated as 0.001 indicating a significant difference.
7. CONCLUSION: Frequency of PONV within first 24 hours in patients undergoing Laparoscopic Cholecystectomy and receiving preoperative 8mg dexamethasone is significantly lower compared with placebo.
8. Keywords: Laparoscopic cholecystectomy, postoperative nausea & vomiting, dexamethasone.
9.

Introduction

Laparoscopic Cholecystectomy (LC) is a procedure that is increasingly common, popular and accepted for patients with symptomatic cholelithiasis. It is associated with a markedly effacious impact on the post-operative course however an appreciably high rate of Postoperative Nausea and Vomiting is observed. (PONV)[1] The overall incidence of PONV in adults is 20-30%, which can be as high as 70-80% in high risk patients.[2] Serious complications such as aspiration, dehydration, electrolyte disturbances can result along with disruption of incisional sites. Surgical, anesthetic and patient factors play a constitutive role in the regard. [3-4] Volatile anesthetics, Nitrous Oxide and Opioids are known anesthetic risk factors and thus preventive measures are justified. Compared with other preventive medications, Dexamethasone has equal or even better efficacy in reducing the incidence of PONV with an added advantage of low cost and longer effectiveness. Its administration decreases postoperative nausea and vomiting after LC.[5]

Dexamethasone is a potent steroid and can augment the antiemetic effect of 5/HT3 receptor antagonists. It counters the effect of Serotonin which is theorized to be released secondary to stress or relative gut mucosal ischemia, as part of the preoperative hypovolemic effect on the bowel. It is an effective antiemetic after single dose administration and is effective in preventing chemotherapy related emesis and PONV, particularly related to patients undergoing LC. Despite better anesthetic techniques and newer generation antiemetics, PONV still persists with an incidence of 30%. The benefit of routine prophylactic antiemetic has been questioned because of their side effects.[4]

The aim of this study was to investigate the efficacy of pre-operative 8 mg of dexamethasone as a suitable agent in reducing/improving PONV in patients of LC. In one study it has been shown that frequency of post op nausea & vomiting was 23% in patients receiving the medication and 63% in control group. ($P<.001$)[6] The dose of the Dexamethasone used remains debatable with different reviews available in literature.[1,4] Our study aims to 1) Help in decreasing frequency of PONV in patients undergoing LC which is not in local practice. 2) Aid and add to local literature on the topic to reach a consensus regarding Dexamethasone use and its particulars for the stated purpose.

Materials & Methods

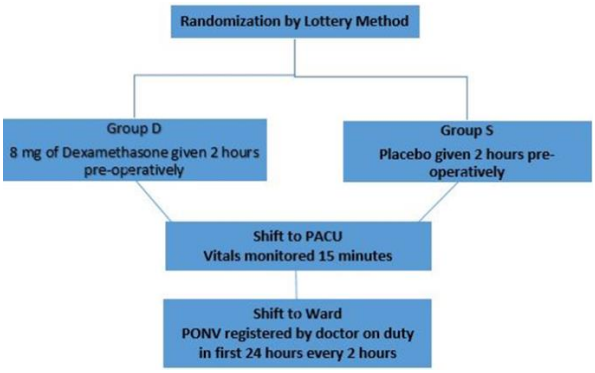
This study was a double blinded, Randomized Controlled Trial which was conducted at Department of Surgery,--removed for blind review---. Non-probability sampling technique was used and 30 patients of LC were assigned to each group. A questionnaire was used as data collection tool and Statistical analysis was done using Statistical Package for Social Sciences (SPSS version 10). Mean and standard deviations were computed for numerical values whereas frequency and percentages were computed for categorical data. Chi square test was used as measure of significance and P-value < 0.050 was considered to be statistically significant.

Inclusion criteria of age group 18-60 and ASA grade I-II was set. Conversely, ASA class III-IV, patients having papillotomy by Endoscopic retrograde cholangiopancreatography (ERCP) within 1 month before and during the first month after operation, patients with signs of endocrine,

renal, hepatic, or immunologic diseases, Patients receiving opioids or tranquilizers during the last one week prior to LC were excluded from study. If the operation was converted from LC to open procedure,& if there was history of gastro-esophageal reflux or taking medications with known antiemetic activity were also excluded. After approval from the hospital ethical committee and acquisition of informed consent qualifying patients were randomized into two groups (D & S) . Lottery method was used for this designation.

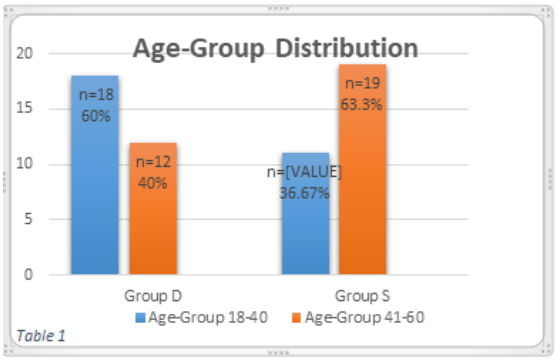
Experimental ; Group 'D' received 8 mg of Dexamethasone and control group ; 'S' received 2 ml of Normal Saline 2 hours pre-operatively. Preparation was done by the Staff Nurse on duty and given by the Trainee Doctor on duty. Episodes of nausea and vomiting were registered by the doctor on duty in first 24 hours after operation. All the LCs were carried out by the Consultants (SR & above). Anesthesia was standardized in all patients with continuous monitoring. Pneumo-peritoneum was created with open technique and LC performed using two ports of 10 mm and two of 5 mm; maintaining 12 mm Hg intra-abdominal pressure. At the end of procedure, the carbon dioxide was carefully evacuated from the abdomen.

In the postoperative anesthesia care unit (PACU), Vital signs (blood pressure, pulse, respiration, pulse oximetry, and adequate answering) was monitored every 15 minutes by the researcher. Patients were discharged from PACU when vital signs were normalized. All patients were assessed every 2 hour, for antiemetic control for 24 hours postoperatively. Readings were recorded in the post anesthetic period, 120 min after extubation, after transfer to the ward, and then after 6 hour and 24 hour after the end of anesthesia. Either vomiting or retching was classed as postoperative vomiting and time was recorded. Nausea and vomiting was evaluated on a 4-point ordinal scale (0=none, 1=nausea, 2=vomiting, 3=nausea and 4= vomiting). Metoclopramide 10 mg IV was available when vomiting occurred or on request of the patient.



Observations and Results

A total of 60 patients were included in the trial with 30 respectively present in each study group. Patients were stratified based on age-cohort (Table 1) into age groups 18-40 and 41-60. The former group comprised 60% (n=18) of group D and 36.67% (n=11) of group S. Latter group comprised 40% (n=12) in D group and 63.33% (n=19) in S group. Mean ± SD was calculated as 37.63+9.29 and 42.5+8.20 years respectively.



On gender-based distribution (Table 2), a female prevalence/frequency of 40% (n=12)

was noted in D group and 26.67% (n=8) in S group while a male prevalence/frequency of 60% (n=18) was noted in D group and 73.33%(n=22) in S group.

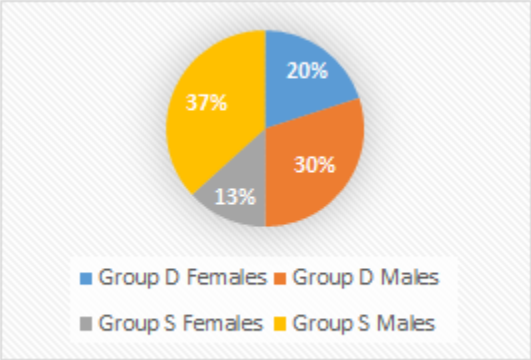


Table 2 - Gender based Distribution

Comparison of frequency of PONV within first 24 hours in both groups was done and an incidence of 26.67% (n=8) in D group and 66.67%(n=20) in S group was found. 73.33% (n=33) in D group and 33.33% (n=10) in S group had no findings of the morbidity, P-value was calculated as 0.001 showing a significant difference. (Table No. 3)

PONV	D Group (n=30)		S Group (n=30)	
	No. of patients	%	No. of patients	%
Yes	8	26.67	20	66.67
No	22	73.33	10	33.33
Total	**30**	**100**	**30**	**100**

Table 3 - Comparative Incidence of PONV
P value=0.001

Discussion

In the rapidly evolving terrain of minimally invasive surgery, Laparoscopic cholecystectomy (LC) is one of the most widely performed, favored and distinctive of surgical procedures. Its multiple advantages have rendered it the current Gold Standard modality of choice for patients with symptomatic cholelithiasis. [6,7] Small wound size, better cosmesis, shorter postoperative hospital stay, decreased morbidity, cost-effectiveness and early return to routine are all benefits constitutive of this current acclaim. Although serious adverse events are uncommon after the procedure, 50% to 75% of patients experience postoperative nausea or vomiting (PONV). [8]In our study, we have evaluated the efficacy of Dexamethasone to counter this adverse probability.

Dexamethasone (Injection) is a medication that is freely available, economical and has minimal associated side effects as a single dose bolus. [8] It qualifies in prospect as a suitable agent for anti-emesis and its frequency of use should be considered and increased/reviewed.

The findings of our study aimed to test this suitability and reported significant reduction in PONV with use of Dexamethasone showing a p-value of 0.001. Our results are mirrored by a comparable study which showed a similar reduction of PONV (incidence rate 23%) in patients receiving same dose dexamethasone preoperatively contrary to control group (incidence rate 63%) (P<.001).[6]

We found Several further studies also documenting and consolidating that dexamethasone, a corticosteroid, is indeed an effective antiemetic for PONV prophylaxis in our cohort of patients.[7-9]. Holte and Kehlet[10] demonstrated that dexamethasone produces antiemetic effects in various types of surgery. The studied Method of administration was as 90 minutes before LC.[10] 8 mg IV is probably the most commonly used dose of dexamethasone for preventing PONV in adults, the optimal dose has yet to be defined.

[11-14] One dose-finding study reported 2.5 mg to be the minimum effective dose for preventing postoperative vomiting in patients undergoing major gynecological surgery,[15] whereas subsequent studies reported 5 mg to be the minimum effective dose in patients of thyroidectomy. [11],[8] Maximal efficacy has been reported in preventing PONV when administration is done immediately before induction of anesthesia rather than near the end of unconsciousness.

Apart from and beyond PONV, BisGaard et al concluded in their study that preoperative Dexamethasone reduced also pain, fatigue and duration of convalescence following LC, as compared to placebo and they recommend the routine use of Dexamethasone.[12-14] Various studies corroborate the same findings [16,17]

In view of our own results as well as the literature review, we conclude it is justifiable to advocate and support Dexamethasone IV as better aided over traditional antiemetics. Its routine use should be proposed for administration and assimilation in normal post-operative protocol of LC Patients. Further studies should be carried out to reach a consensus on a standard dose for the purpose.

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Roaming Land of Unknown: Making Sense of Medical Learning in a Traditional, Pre-clinical Curriculum

Laiba Faheem[1], Sumia Fatima[2], Sidra Hamid[3]

[1,2,3] 4th Year MBBS Student, Rawalpindi Medical University, Rawalpindi, Pakistan

[2]Assistant Professor, Physiology, Rawalpindi Medical University

Author's Contribution

1,2 Conception of study
3 Experimentation/Study conduction
1Analysis/Interpretation/Discussion
2 Manuscript Writing
3 Critical Review
1,2 Facilitation and Material analysis

Corresponding Author

Laiba Faheem[1]
Email:
laibafaheem14@gmail.com

Sumia Fatima[1]
Email:
sumiahfatima3@gmail.com

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Abstract

INTRODUCTION: During dedicated 1st and 2nd years of medical learning, students routinely learn the pathophysiology, general management and treatment of specific diseases. However, students do not receive any hands-on clinical training to apply that knowledge when their clinical rotations start.

Early clinical exposure would help to relieve stress of the students pertaining to patient handling, developing real-time clinical reasoning, communication skills, professional attitude and patient empathy. The transition between the theoretical and the clinical phase of undergraduate medical education has often been characterised as the most stressful period of undergraduate medical education.

OBJECTIVES

10. To assess the views of medical students on making Early Clinical Exposure (ECE) a part of Integrated Modular Curriculum to better integrate Basic and Applied Medical Knowledge.
11. To assess the views on benefits and drawbacks of ECE.
12. To assess how specifically 3rd year medical students feel equipped when first exposed to a clinical setting.

MATERIALS AND METHODS:

A cross sectional study was conducted among the students of 3rd, 4th, and 5th year MBBS in Rawalpindi Medical University from Aug, 2021 to May, 2022. A Self Structured Questionnaire was used as the data collection tool. Data was analysed using SPSS v22. Chi square test, mean, and standard deviation were applied.

RESULTS: The majority of students 80% (n=240/300) responded that Early Clinical Exposure (ECE) be made part of Modular Curriculum to better integrate Basic and Applied Medical Knowledge. 78% of students responded that ECE would have prepared them better for clinical years 47.3% strongly agreed that ECE would be an enjoyable method for learning as it would break the monotony of didactic lectures and would also help in better understanding of medical learning but 31.3% responded that ECE would be time consuming.

DISCUSSIONS AND CONCLUSIONS:

ECE is an emerging need of the time. Clinical years' students believe that their understanding and performance in pre-clinical years would have been significantly better were they to have an exposure of clinical environment. Pertaining to students' worries on ECE being time consuming and only adding burden, it would need to undergo extensive research so as to best inculcate it in curriculum that is feasible for staff and students alike.

KEY WORDS: Curriculum (D003479), Education (D004493), Hospital (D006761), Medical School (D012577), Early Clinical Exposure (ECE)

Introduction

The journey to become a doctor is long and burdensome and what the medical students learn in pre-clinical years assumes a critical part in that journey. Without sufficient knowledge and training, medical students will find it challenging to perform well in a clinical setting. Early Clinical Exposure (ECE) should be what fills this hole among the pre clinical years and the clinical years(1). Medical students' academic performance in basic sciences corresponds not only with their anxiety to testing, yet considerably more so with the clinical climate they are presented to (1). It is an undeniable truth that training improves clinical skill. The more complex situations students come across in different settings, the more clinical critical thinking abilities they will adopt(2).

While medical students ought to invest energy obtaining abilities and figuring out how to make case analysis in third year, they wind up exploring through their communication skill, history taking, and case presentations.

A research done at University of Washington School of Medicine revealed astonishing results that the students in the clinical-exposure group were more satisfied with their medical education than were the other students ($p = .009$). (3) An Indian study found how early clinical exposure was a better learning methodology than traditional teaching for medical students. (4)

ECE can act as a stage for giving the preclinical year medical students a vast assortment of encounters including all the domains of learning. It can likewise be adjusted as the helping system to present the different components of clinical setting. This program whenever executed actually can possibly be the best initial phase in the creation of an all-encompassing doctor (5) .

A multi-layered learning climate chips away at further developing knowledge, ability, and aptitude of a student. Adoption of ECE will assist with welcoming an enhancement for this large number of fronts. Broad exploration will be expected to guide and make fruitful an ECE program if bought into action

Materials & Methods

We conducted a cross sectional study from Aug, 2021 to May, 2022 in Rawalpindi Medical University among the students of 3rd, 4th and 5th years. We conducted this study to better understand the views of medical students of clinical years (3rd, 4th and 5th years) on making Early Clinical Exposure (ECE) part of Integrated Modular Curriculum to better learn Basic and Applied Medical Knowledge taught in preclinical years.

The students were selected by convenience sampling with a total sample size of 300; 100 students from each year. Half (50%) were male and half (50%) were female students. 3rd, 4th and 5th years students who consented to be part of the study were included, and those who were not willing were excluded.

Data was collected using self-administered questionnaires made after detailed literature review, which contained three sections. The first included consent, demographic information, and the viewpoint of the participants regarding medical empathy. The second related to views about ECE in preclinical (1st and 2nd) years. 3rd section comprised of questions related to confidence level of students regarding basic skills such as history taking, interacting with patients and staff when they initially entered clinical years (3rd year).

The study was conducted in accordance with the declaration of Helsinki, and the anonymity and confidentiality of the participants was preserved.

Observations and Results

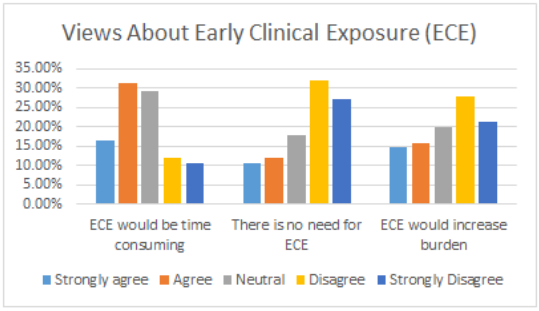
The results obtained are:

The majority of students 80% (n=240/300) responded that Early Clinical Exposure be made part of Modular Curriculum to better integrate Basic and Applied Medical Knowledge. 11.3% replied in the negative whereas 8.7% were unsure.

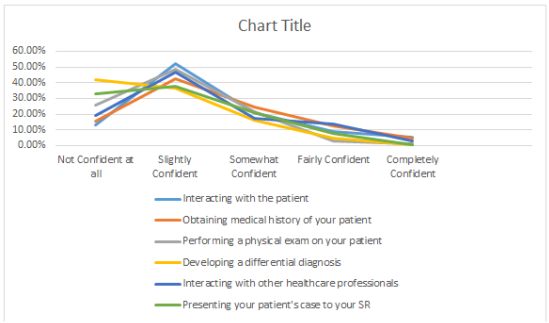
The majority of students 64% (n=192/300) remarked that they were not adequately prepared during the first 2 years of medical learning to begin their clinical years. 20% responded that they were; whereas 16% responded in doubt. On enquiring whether ECE would have prepared them better for clinical years, 78% (n=234/300) responded positively; 13.3% remarked in the negative and 8.7% showed neutrality.

Percentage % of Students who strongly agreed to include Early Clinical exposure as part of integrated Medical Curriculum	47.3% strongly agreed that ECE would be an enjoyable method for learning as it would break the monotony of didactic lectures. 38.3% agreed
	52% strongly agreed that ECE would help in better understanding and retaining knowledge taught in pre clinical year. 35.3% simpled agreed
	45.3% strongly agreed that ECE would motivate self studying. 35.3% agreed
	47.3% strongly agreed that ECE would make a student better acclimatized to the clinical settings. 39.3% agreed
	54.7% strongly agreed that ECE would better a student's communication skills. 28.7% agreed
	44% strongly agreed that ECE would make student teacher interaction better. 25% agreed
	52.7% strongly agreed that ECE would help to better understand the patient. 30% agreed
	42% strongly agreed that ECE would better equip us to apply our knowledge when the opportunity arises. 41% agreed
	40.7% strongly agreed that ECE would help develop a better understanding of the life of a physician. 38.7% agreed
	42.7% strongly agreed that ECE would develop better teamwork skills. 38.7% agreed
	46.7% strongly agreed that ECE would help develop better clinical skills. 38% agreed
	42.7% strongly agreed that ECE would reduce the 'shock of practice' as one enters 3rd year. 37% agreed
	47.3% strongly agreed that ECE would help in making better career decisions; (make an informed and early decision on your choice of specialty). 30% agreed

On asking about their views of including Early Clinical Exposure in Integrated Modular Curriculum, the responses were. 31.3% responded that ECE would be time consuming. 32% said that there is no need for ECE and 28% said that ECE would only increase burden



On enquiring about their experience as they entered 3rd year, the majority of students responded that on a scale of 1-5 their confidence level was 2 in interacting with the patient, obtaining medical history, performing a physical exam on patient, presenting the patient's case to SR, and in interacting with other health care professionals. They rated their confidence level as minimum (1 on a scale of 1-5) in developing a deferential diagnosis of a disease.



On applying chi square between "Should Early Clinical Exposure be made part of Integrated Medical Curriculum" and "Do you believe you were adequately prepared during your non-clinical years" the p-value came out to p=0.000013 which shows high correlation between the two variables. Also, between "Inclusion of ECE in medical curriculum" and the response to "Would they have been better prepared in their 3rd year if ECE would have been there" the p value came out to be very low signifying high correlation between them (p=2.22E-30)

	Should Early Clinical Exposure(ECE) be made part of Modular Curriculum to better Integrate Basic and Applied Medical Knowledge
Obtaining medical history of your patient	Pearson Chi-Square value =0.019
Performing a physical exam on your patient	P=0.001
Developing a differential diagnosis	P=0.001
Interacting with other healthcare professionals	P=0.039
Presenting your patient's case to your SR	P=0.000480

Discussion

ECE (i.e., early student-patient contact or preceptorship) as an instructive model has been taken on by numerous clinical schools all over the world to close the gap between basic and clinical sciences. As far as the preclinical years, ECE ought to happen before the official clerkship and internship training programs(1)

The majority of students 80% responded that Early Clinical Exposure (ECE) should be made part of Modular Curriculum to better integrate Basic and Applied Medical Knowledge.64% students while recalling their 1st experience of clinical year (3rd year) remarked that they were not prepared adequately during the pre-clinical years and ECE would have prepared them better for clinical years.

Teacher-centered learning (instructional talks) is the most well-known strategy for educating however researches have demonstrated that enhancing instructional talks with Early Clinical Exposure will make learning an enjoyable thing(6). 47.3% students strongly agreed that ECE would be an enjoyable thing as it would break the tedium of didactic lectures and will advance patient focused learning.

Entering medical education with no information in advance is like roaming the land of unknown. ECE will assume a significant part in figuring out basic clinical terms, making easier transition from layperson to student physician, give a valuable chance to bring social importance and contextualize basic sciences learning and learning of essential clinical skills (7). It will assist with understanding and retain anatomy and neuroanatomy and to associate it better with clinical settings.(8) ECE would help a student better adjusted to the clinical setting.

A medical student facies significant nervousness and social pressure. He has no knowledge of what lay ahead. ECE will assist with overcome their pressures and anxieties and propels them to form a better insight into the medical profession(9)(10). It will without a doubt prompt a positive impact on the attitude of the student towards medical education which will assist them with accomplishing social as well as professional satisfaction(11)

Early Clinical Exposure would assist the students to have an idea of physicians' lives and practices from the initial years and it will assist with improving vocation decisions (12).ECE would upgrade students' confidence, interpersonal communication skills and critical thinking setting them up better for the first clerkship. ECE will ameliorates the shock of transitioning into clinical practice(13).

ECE would upgrade student- teacher interaction prompting more confidence and more interest in the clinical field (14) It will likewise assist a student with acquiring basic skills to save a life ,"Basic Life Support" Skills as it is an essential obligation of a medical professional to respond and care for a person in an emergency(15)

Early patient contacts appear to mitigate the apparent "shock of practice" during the transition from the pre-clinical into the clinical years.(16)(17)(18).

Most of the medical students while consenting to the advantages of Early Clinical Exposure additionally commented that ECE is a tedious technique and cannot be applied to each topic of gross anatomy as tenure of first M.B.B.S. is just a single year and three basic subjects have to be covered(19)(20)

Some students who are academically weak find it challenging to live up to the expectations of an ECE module. On occasion it might become hard to produce and maintain the concentration of the student in ECE, at the hour of approaching university exams as it is not asked in the university examination. Another challenge that can be encountered during ECE is distinguishing and coordinating with supportive clinical departments and cooperative patients(21).

Now and again ECE can create confusion in the minds of the student, in light of the fact that a disease can effect multiple systems at the cellular level, so to study about any disease not only is anatomy and physiology essential but also the pathology affecting various organs is important. As the students do not have knowledge of pathology, it can create confusion(22)

Conclusion:

Early Clinical Exposure has its advantages and disadvantages but benefits outweigh the risks significantly. ECE is a bridge between pre-clinical sciences and clinical subjects. ECE cannot totally replace the traditional method of learning but a hybrid of ECE and didactic lectures would go a long way to improve the learning of medicine. A student in ECE may assume following roles

Passive Observer: As passive observers, the students only observe a complex situation such as performance of a trocar suprapubic cystostomy for urinary retention.

Active Observer: As active observers, the students observe a simple situation such as performance of indwelling urethral catheterization in a female patient with urinary retention and also record their findings using a checklist.

Actor in Rehearsal: As actors in rehearsal, the students perform a task for learning such as performance of indwelling urethral catheterization in a female pelvic simulator.

Actor in Performance: As actors in performance, the students can assist a resident in performing an indwelling urethral catheterization in a female patient(23)

Tell me and I forget, teach me and I may remember, involve me and I learn

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Quackery in the Treatment of Long Bone Paediatric Fractures

Maham Tariq[1] , Yumna Khan[2], Aamnah Tariq[3], Rafeya Khan[4], Sara Malik[5], Mehwish Changeez[6], Muzna Iftikar[7], Ghulam Khadeeja[8], Ramlah Ghazanfor[9], Javeria Malik[10], Hafiz bilal Ahmed[11], Jahangir Sarwar Khan[12]

1 MBBS, MRCS, Fellow breast surgery CMH Rawalpindi

2,4,5,6,7,8,9,10,11 FCPS General Surgery Holy Family hospital Rawalpindi,

[3]2nd Year MBBS RMU,

[12] Head Of Department, Surgical Unit 1 Holy Family Hospital Rawalpindi.

Author's Contribution

1,7,8,12 Conception of study
2,4,11 Experimentation/Study conduction
1,3,10 Analysis/Interpretation/Discussion
1,2,4 Manuscript Writing
4,5,9 Critical Review
3,5,6 Facilitation and Material analysis

Corresponding Author

Yumna Khan
Post graduate resident, surgical unit 1, Holy Family Hospital, Rawalpindi
Email:Yumnakhan226@gmail.com

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Abstract

BACKGROUND:
Fractures are common across all geographical parts of the world, across all ages. Traditional bone setting is quite rampant in the treatment of pediatric fractures. The objective of the study is to find out its frequency in our setting prior to presenting to orthopedic surgeons and its consequences.

METHODOLOGY:
This cross sectional study was conducted at the in-patient, out-patient as well as the Accident and Emergency Department of Benazir Bhutto Hospital, Rawalpindi, Pakistan from May 2017 to July 2017.A total of 200 pediatric population (till age 12) participated. Data collection tool included information on age, gender, rural/urban background, mechanism of injury, site and type of fracture, neurovascular bundle status, prior quack treatment, , time interval of presentation after fracture and need for operative treatment.Data was analyzed using SPSS version 22.

RESULTS:
Out of 200 patients, 69.5% were males and 30.5% females.Delayed presentation was more common in rural background. Out of 200 patients 12% had quack treatment after bone fracture,155 sought attention(medical or quack) within 24 hours,13 in 24 to 48 hours, 10 in 48 to
72 hours and 22 after 72 hours.

CONCLUSION:
Our study showed that lack of resources,lack of readily available or accessible health resources and lack of education and awareness led people to seeking attention from quacks which had potential long term adverse effects hence these factors need to be curbed inorder to curb this unhealthy practice.

Keywords: Quackery, Bone Fractures

Introduction

Fractures are frequently encountered injuries in every age group including the paediatric community. Causative factors range from trauma via road traffic accidents/falls(1), metabolic bone diseases(2) or non-accidental injury (3) . Fractures are common place in the male gender owing to their thrill seeking behaviour and indulgence in sports and recreational activities, and lower limbs are affected more than the upper limbs(4) . American society of orthopedic surgeons has devised guidelines which serve as a beacon of light to guide treatment of fractures but many topics remain controversial(5). Along with the allopathic medicine, various other forms of treatment exist including homeopathy (involving herbs), quackery, faith healers even magicians. All of these have been, at times, involved in disastrous practices and consequences including death(6,7) . In this article we aim to address the issue of quackery, which is simply the unlicensed medical practitioners. Quackery has been a problem since times immemorial(8) and Evidence Based Medicine has been the biggest paradigm in the practice of medicine(9) .At times like these where people readily link vaccines to emerging mental diseases and AIDS as a means of genocide backed up by government, it is no wonder that practice of charlatans is booming(10) .In USA 27 billion dollars are wasted annually on unscientific medical practices exceeding the budget spent of biomedical research(11) . Quacks are adept at deception, leading people to believe that they offer the best cure hence leading to a delayed hospital presentation and wastage of resources and time(12) Paediatric fractures constitute a paramount reason for presentation to quacks. Cases mismanaged by quacks could have a wide range of horrific consequences ranging from stiff joints, chronic osteomyelitis, nerve injury, mal union ,gangrene, compartment syndrome to death(13,14). It is unlikely that an orthopaedic surgeon will practice without encountering a bonesetter as a rival (12). Hugh Owen Thomas hailed as the father of Orthopaedics in England was a traditional bonesetter. Just as no certification is required for midwifery, no certificate is required for bonesetting either. Bonesetters charge about 13pounds while hospital facilities cost 300 pounds, ofcourse the cost is much higher if primary treatment is received at the hands of a Traditional bonesetter first and then referral to hospital is done13. Utility of local resources and their infinite experience may infact enlighten our practices. However use of legislature needs to be done to ensure safe practices. (15) .Not much has been written about these counterfeit practitioners with regard to bone fractures in children. So, the objective of our study was to find and evaluate the practices of traditional bone setters (quacks) in managing pediatric bone fractures as well as educating the masses against them inorder to curb limb threatening complication and prevent individual from being a burden on society as well as to save the patient and family from irreversible misery

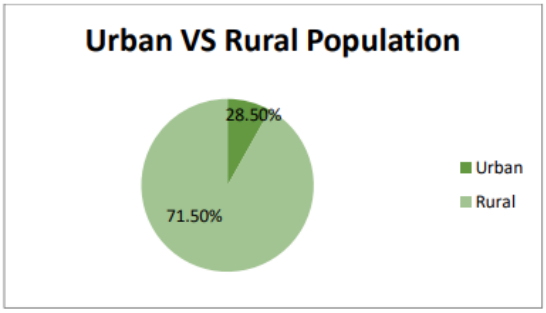
Materials & Methods

After approval from the Ethical Committee of Allied Hospitals This cross sectional study was conducted at the in-patient, out-patient as well as the Accident and Emergency Department of Benazir Bhutto Hospital, Rawalpindi, Pakistan from May 2017 to July 2017.Sample size was calculated using WHO calculator.A total of 200 pediatric population (till age 12) participated. Data collection tool

included information on age, gender, rural/urban background, mechanism of injury, site and type of fracture, neurovascular bundle status, prior quack treatment,time interval of presentation after fracture and need for operative treatment. Chi Square tests were applied on the data and it was analyzed using SPSS version 22.

Observations and Results

Total 200 patients were included in the study out of which 69.5% were males and 30.5% were females Geographical location of cases (n=200) shown in pie chart no 1:



Total number of cases treated by Quacks (n=200) shown in pie chart no 2:

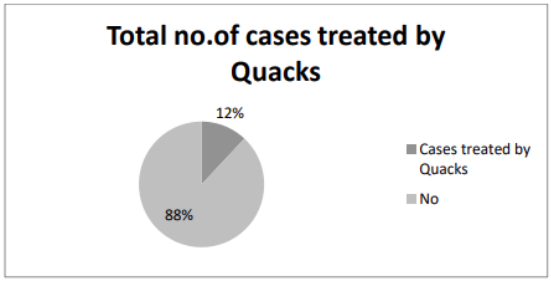


Table 1: Time Interval in seeking treatment (medical or Quack) (n=200)

	No	Yes	
Within 24 hours	13	142	155
24 to 48 hours	1	12	13
48 to 72 hours	3	7	10
More than 72 hours	7	15	22
Total	24	176	200

Table 2: History of quack treatment before proper medical intervention (n=200)

	Within 24 hours	24 to 48 hours	48 to 72 hours	More than 72 hours	Total
Urban	35	3	4	15	57
Rural	120	10	6	7	143
Total	155	13	10	22	200

Discussion

This article is aimed at deliberation on quackery while dealing with paediatric fractures, and as mentioned earlier this topic has not been explored much in the past,hence studies which analyze this precise topic have been few and far between. Our results indicate that such practices are rampant in rural areas which lead to delayed presentation to licensed practitioners yielding a poor outcome. This could be because of decreased literacy rate and poverty. These pseudo-doctors pose a great threat to society and health professional by manipulating loopholes of law and feeding on the fears of the victims such as increased cost of treatment in a proper set-up. Campaign against health fraud came into being to curb this(16,17) . Owing to globalization and migration, such local practices are moving across the borders hence making it imperative for us to be well aware of them inorder to recognize and deal with them(18) . In some parts of Asia and Africa 80% of people prefer traditional medicine including faith healing and untrained bonesetters over qualified doctors for first aid. Despite all this, A study conducted on the polish rural community brought to light the that 79% of cases treated by quacks shockingly classified the treatment as satisfactory despite having to face the aftermath(19) . Patients after quack treatment remain tormented with unresolved fractures and seek medical help when it fails. Despite a wide availability of licensed pactitioners people resort to unlicensed ones.

The lack of education and rigorous medical training make quack based treatment cheaper thus making it widely available to the masses. The financial constraints especially in rural and semi-urban areas along with lack of awareness make quackery a widely used option despite proven perils(12) . Traditional bonestters(TBS) popularly known as "pehalwaans" in our local dialect were subjected to a 1 day training course. And a short training of one day led to a statistically significant difference in morbidity(20) . In a few far flung areas patients have to travel as much as 300km to receive specialist surgical evaluation and treatment. Some arrive at the back of their fellows because infrastructure is poor and transport is not readily available, hence traditional bonesetters appear as the only practical solution. Because they are both readily available and much cheaper as compared to licensed practitioners. Since bonesetters lack education and proper training, they have no inkling about the hazards posed by tight splintage which can lead to gangrene making it necessary to amputate the affected limb(21) .Cause of gangrene is an excessively tight splint which is not promptly removed when compartment syndrome is developed These rates were decreased by half after subjecting the traditional bonestters to short 1 day or 2 day courses. Conducting these was not easy because they suspected that it was an attempt to put them out of business. However in collaboration with the local leaders the true purpose was explained to them making sure that a majority attended. (21) The menace of traditional bonesetters cannot be attributed solely to low level of education and finances as cultural and societal beliefs also contribute heavily towards it. Their popularity can easily be gauged from the fact that a sizeable number of patients are discharged on request from proper medical facilities inorder to seek consult of these orthodox pseudo-practitioners. Cost of healing a paediatric forearm fracture is estimated to be $35 and duration is 6-8 weeks while cost of amputation can neither be calibrated in terms of physical and mental distress caused by it, not to mention the irreparable loss to the society and nation as a whole. More unfortunate is the fact that aftermath is the direct result of parents' decision who would not face the music the way an amputee would. The belief that reaching a tertiary hospital only results in amputation should be eradicated. (22) Need of the hour is to understand why patients resort to such dubious treatments so they can be educated and hence this practice can nipped in the bud(23) . Along with tackling quacks with an iron hand and holding them accountable for the damage that they have done in addition to reimbursing the affectee(24) . Prevention remains the best course of action. It is mandatory to eliminate quacks and provide motives for trained medical practitioners to be available everywhere for dealing with the patients especially in the periphery, where people are improvished and ignorance is the order of the day(25) .

LIMITATION OF STUDY: It is a single centre study

Conclusion:

We discovered that considerable population size still opts for quacks either prior to seeking medical attention or as the sole means of treatment.Although quack treatment is affordable and reachable but its not reliable and can put patient in such a morbidity that might end up in limb amputation. By saving a few hours, or few pennies one might end up in such irreversible complications that he or she will be a burden

on the society and family for the rest of his life.

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A Rare Case of Post Trauma AV Fistula With Associated Pseudoaneurysm Along Tibial Vessels

Mehak Fatima[1], Aiman Waris[2],Mudassar Gondal[3],Laraib rasul[4],Ameena shahwar[5]

[1,2,3,4,5] Department of Pediatric Surgery, Holy Family Hospital

Author's Contribution

[1] Conception of study
[2,4] Experimentation/Study conduction
[3]Analysis/Interpretation/Discussion
[1,3] Manuscript Writing
[2]Critical Review
[3,,5]Facilitation and Material

Corresponding Author

Mehak Fatima,
Post graduate Resident,
Department of pediatric surgery,
Holy Family Hospital, Rawalpindi

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Abstract

Post trauma AVF occurs rarely, generally where an artery and vein are in close proximity. We here describe a case of young patient who developed a swelling at the site of trauma after 2 weeks of injury. After confirming the provisional diagnosis of AVF by doppler ultrasound the patient was referred to vascular surgeon for expert opinion.

Keywords:

arteriovenous fistula, AVF, post-trauma, doppler ultrasound, vascular

Introduction:

Arteriovenous fistulas correspond to abnormal connection between an artery and a vein. Etiological factors may be broadly classified as congenital and acquired. Congenital arteriovenous fistulas occur commonly in areas like lungs, dura, liver while acquired fistulas occur due to penetrating trauma or gunshot injuries [1]. Ultrasound doppler is the most specific investigation for confirmation of diagnosis. Depending upon various factors, conservative, endovascular repair and open surgery are the three management options [1]. We describe here case of a young child developing post traumatic arteriovenous fistula.

Case Report

A 10 year old boy presented to pediatric surgery department of a tertiary care hospital with complain of painless swelling on anterior aspect of right lower leg from last 20 days (figure 1).

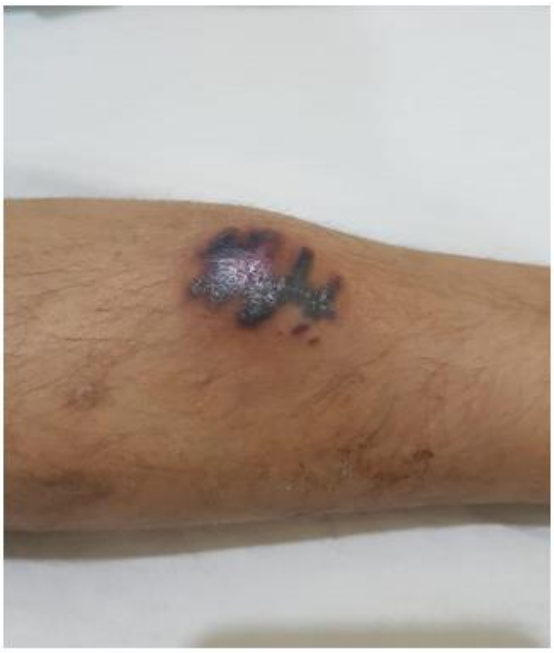

Figure 1: post-trauma swelling

Swelling was not associated with any other symptom. On examination, a 3x2cm incompressible lump, showing no signs of acute inflammation, with somewhat blackish discoloration, was present on the anterolateral aspect of right lower limb, approximately 10cm from the knee joint. Rest of the general physical examination was unremarkable.

On further questioning, patient gave history of trauma,1 month back, to the same site while playing. It was a closed wound and required no intervention at that time. Patient gradually developed swelling at that site within a period of 2 weeks and showed up at a local clinic, at periphery, for checkup. He was advised oral antibiotic considering an infected wound. However, the swelling did not settle even after antibiotic cover. Patient again presented to the local clinic with persistent complain. The swelling was aspirated with a 5cc syringe only to yield a bloody tap. A provisional diagnosis of hematoma vs arteriovenous fistula was made and patient was referred to tertiary care hospital for expert opinion and further workup.

On presentation at our hospital, patient was advised doppler ultrasound of right limb which showed biphasic flow and spectral broadening in all visualized vessels i.e common and superficial femoral, popliteal, anterior and posterior tibial and dorsalis pedis arteries. It also revealed a well-defined rounded anechoic oval shaped bilobed area 10cm below the knee joint along posterior tibial vessels. The lesion filled up with blood and showed pepsi cola / ying yang sign on color doppler (figure 2). Hence the findings were suggestive of arteriovenous fistula with pseudoaneurysm formation along posterior tibial vessels.

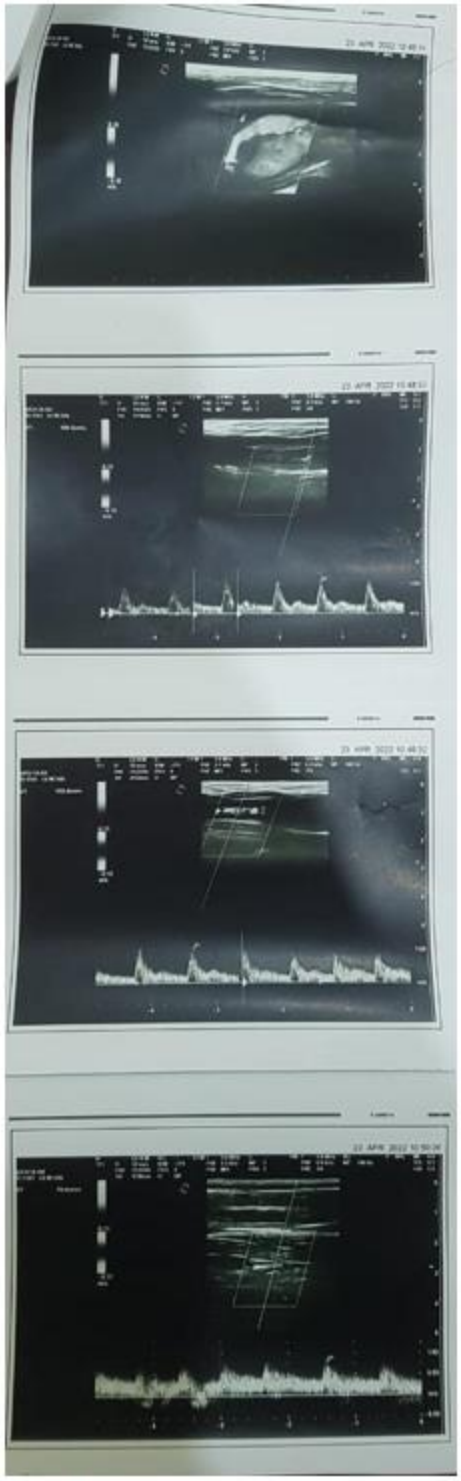

Figure 2: Doppler ultrasound

Discussion

Arteriovenous fistula is an abnormal communication between an artery and a vein, usually forming where the two vessels are in close proximity. It either exists primarily, as a congenital anomaly, or develops secondarily, due to trauma or invasive vascular procedures. Post trauma AVFs are more common in lower extremities particulary in femoral and popliteal vessels [1]. Incidence of post trauma AVF is estimated to be about 0.88% [2].

Most AVFs are small in size, asymptomatic and resolve spontaneously while few are larger in size, symptomatic and require some therapeutic approach. Clinical manifestations vary from swelling and pain to major complications like arterial and venous insufficiencies, cardiac failure and pulmonary hypertension [3]. Duplex ultrasound is the most common and first line imaging modality for confirming an AVF, having a sensitivity and specificity of 95% and 99% respectively. However, CTA is another option which can also be performed. It definitely helps to give a better anatomical view of the site and helps in considering options for surgical management.

AVFs smaller in size may resolve spontaneously within a period of 2 weeks [4]. However, larger ones require close monitoring for development of complications as well as looking for the best surgical options. Surgical intervention may be divided into open or percutaneous approach with the former requiring considerable professional expertise. Percutaneous intervention is more commonly done nowadays which involves putting endovascular coils to embolise the fistula or deploy covered stents to exclude the fistula from circulation [5].

Conclusion and Recommendation

Post trauma AVF formation is quite rare but not uncommon. Hence, any swelling developing after trauma should include AVF in differentials alongside abcess and hematoma. Treatment options require skill and expertise. Best approach is to wait and watch for resolution otherwise going for least invasive option.

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Ovarian Cystaadenoma

Author:

Dr. Makhduma

Postgraduate trainee
Gynecology, Lady Aitcheson Hospital

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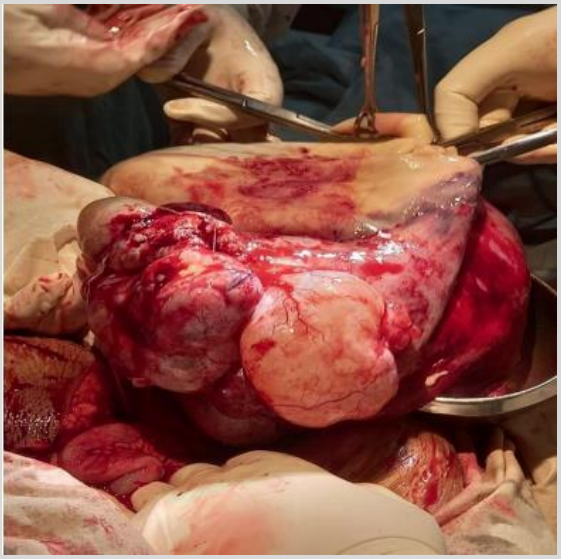

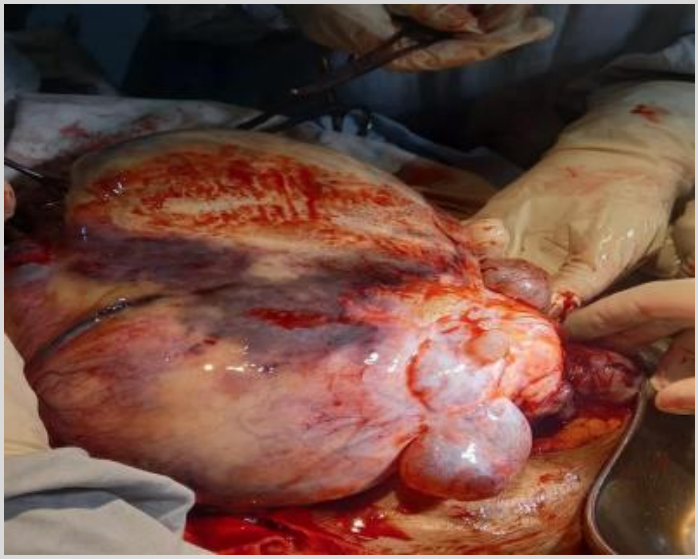

Description:

A 35-year-old female presented in OPD with dull pelvic pain along with dyspareunia and dysmenorrhea. She also had pressure symptoms frequent micturition. On ultrasound cyst was found in ovary. Surgery was performed. Cystic fluid was drained, debulking was done and histopathology was sent.

Sigmoid Volvulus

Author:

Dr. Ayesha Huma[1]

Dr. Hira Waris[1]

[1]Postgraduate trainee
Surgical unit 2, Holy Family Hospital

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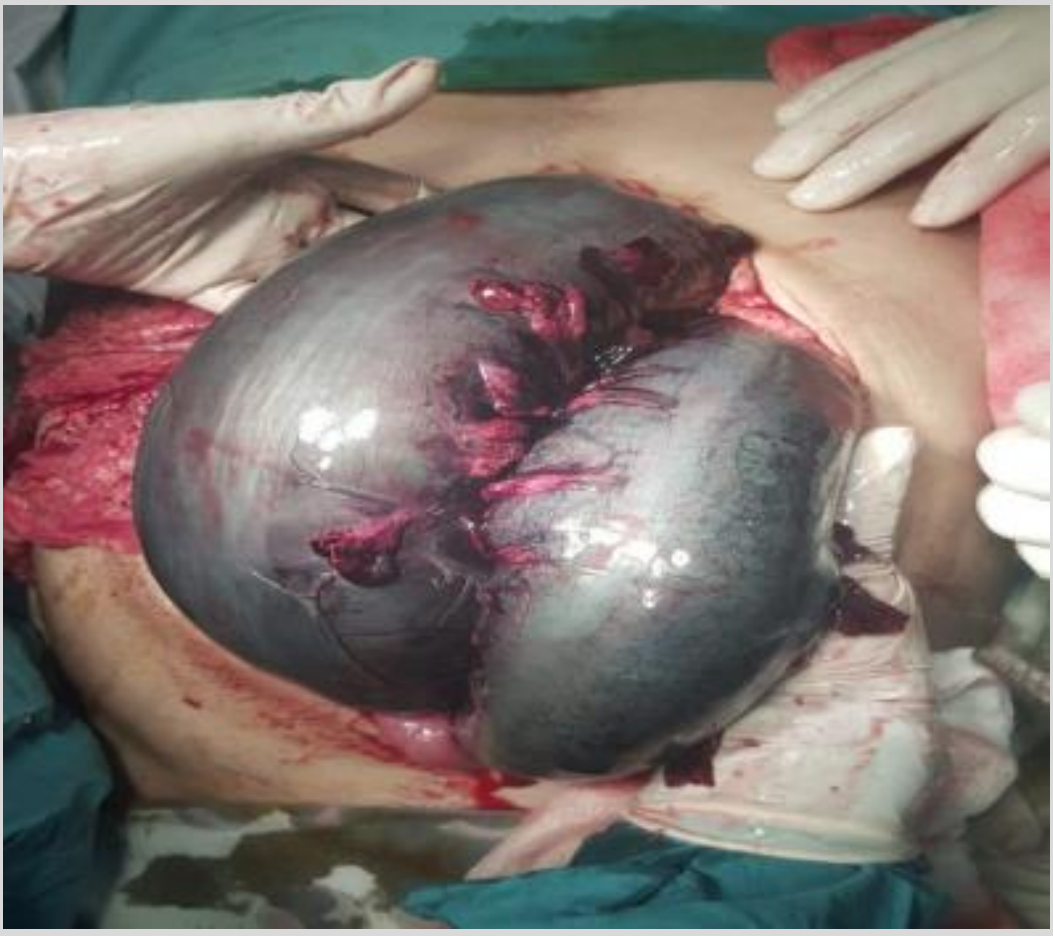

Description:

48years old female presented with complaints of abdominal pain, constipation, vomiting and abdominal distension for last 03 days. After optimisation, she was proceeded with exploratory laparotomy which revealed sigmoid volvulus for which resection and colostomy was made.

RCC with Infra hepatic IVC Thrombus

Author:

Dr. Wajiha Arshad[1]

Dr. Saeed Khan [1]

[1]Postgraduate trainee, General Surgery, Unit 2, Holy Family Hospital, Rawalpindi

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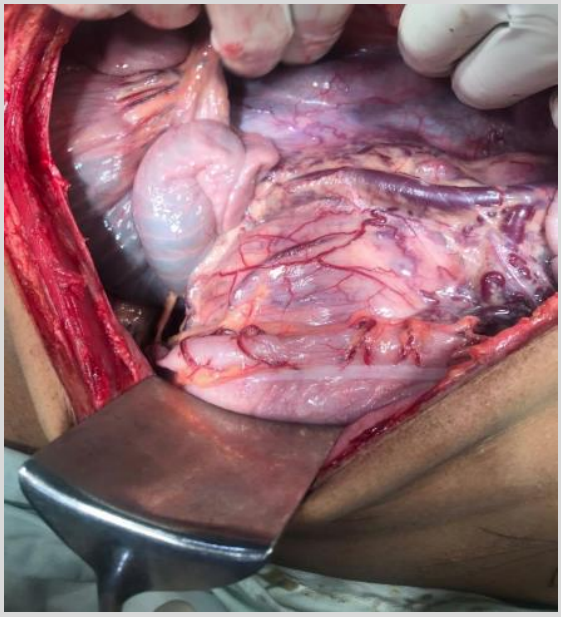
Pic1: Left renal mass displacing the colon



Pic2: Infra hepatic IVC containing thrombus

Description:

24 years old male presented with complaints of left lumbar pain, haematuria, and weight loss for last 01 month. His CT revealed left renal mass which was displacing the colon and a thrombus in infra hepatic IVC. He was proceeded with radical left nephrectomy and IVC thrombectomy.

Rash Pattern

Author:

Dr. Hafsa Malik

Postgraduate trainee, General Medicine, Unit 2, Holy Family Hospital, Rawalpindi

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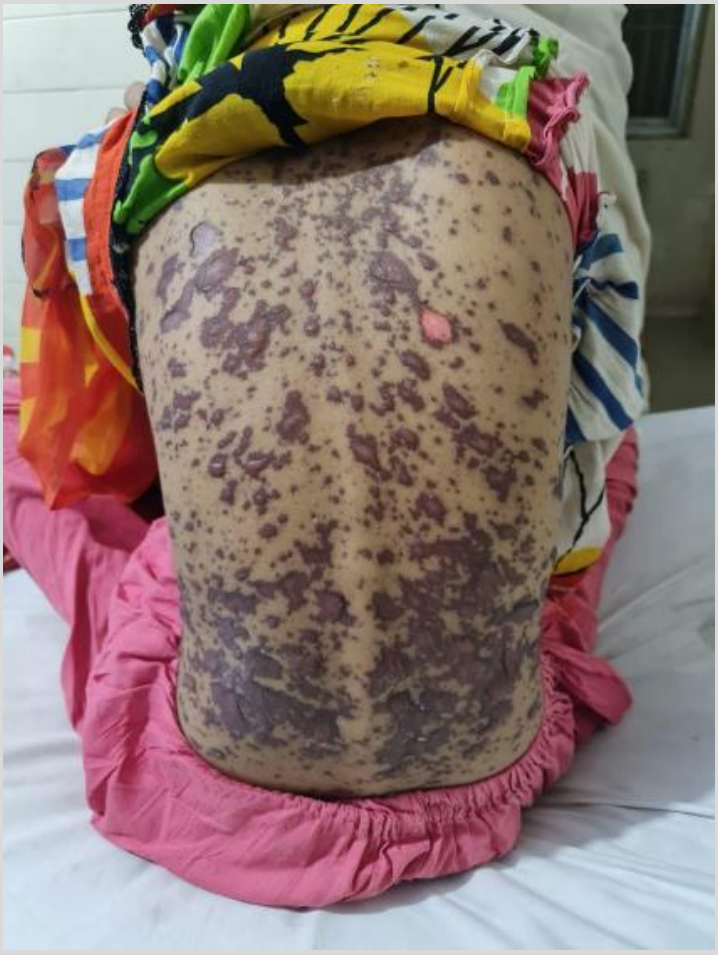

Description:

A 17-year-old female, resident of Chakwal with no previously known comorbids, presented with complaints of high grade fever up to 102° F, associated with rigours and chills and body aches followed by development of rash and blisters all over the trunk. On the next the rash spread and involved whole body.

CASE REPORT

Popliteal Artery Aneurysm

Author:

Dr. Sahab Ahmad

Postgraduate trainee, Cardiac Surgery, Rawalpindi Institute Cardiology

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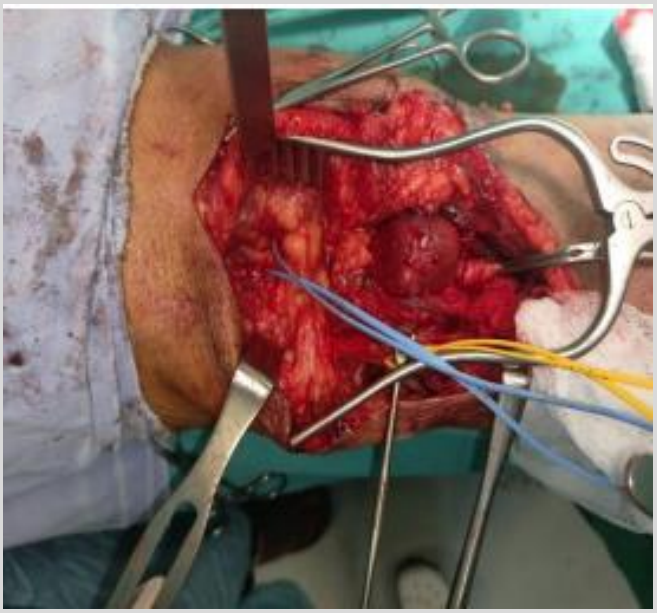

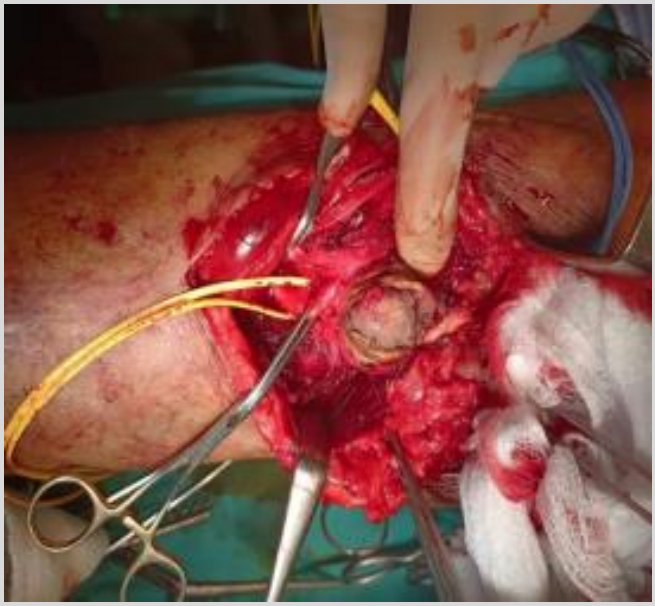

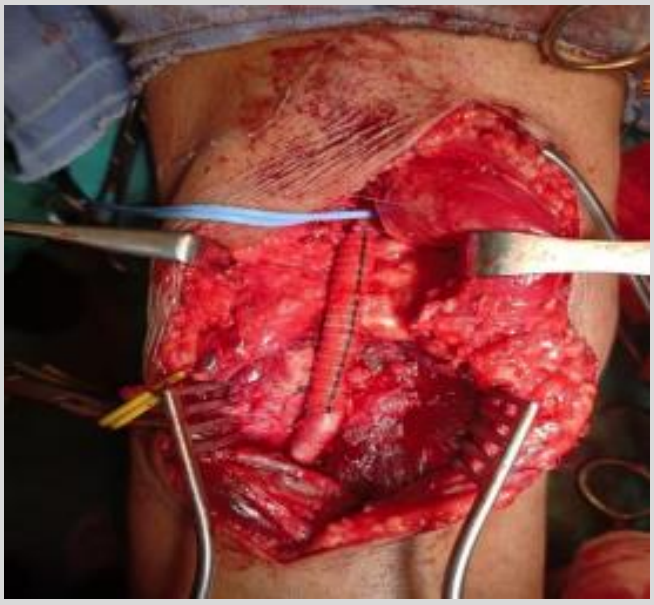

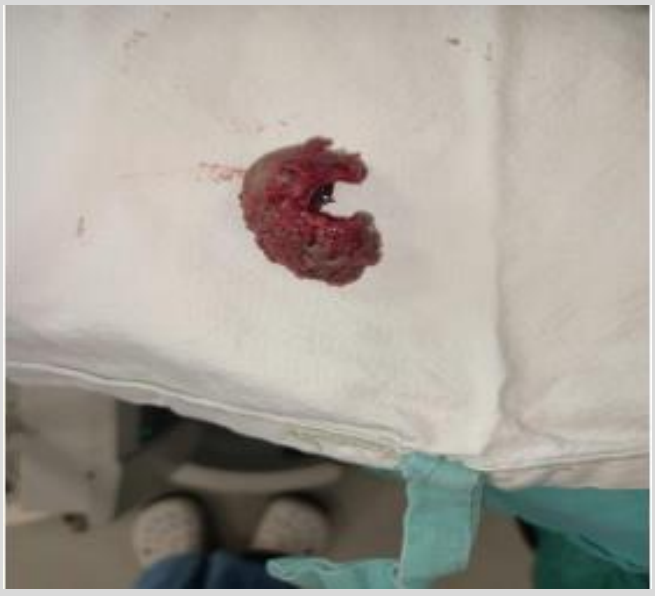

Description:

50 yrs old female, no co-morbids, presented to OPD with history of progressively increasing swelling behind right knee joint, on examination pulsating swelling, distal limb examination pr pulses were week and signs of microembolization to foot were seen. It was popliteal artery aneurysm and was repaired using PTFE tube graft.

CASE REPORT

Intestinal Obstruction Secondary to Ascaris in 05 Years old Child

Author:

Dr. Salman Qamar

Postgraduate trainee, Pediatrics Surgery, Holy Family Hospital, Rawalpindi

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Description:

A 05-year-old child presented to Peads surgery ER with complaints of pain abdomen, distension, and constipation. On examination, signs of peritonitis were present. Patient proceeded with exploratory laparotomy and worms wee found in small gut with a huge colony causing obstruction at ICJ, enterostomy revealed ascaris, ileostomy was made, and gut was evacuated. Post operatively, anthelmintic therapy started.

CASE REPORT

Mesenteric Ischemia

Author:

Dr. Ayesha Huma[1]

Dr. Hira Waris[1]

[-1]PGT, General Surgery Unit 2, Holy Family Hospital, Rawalpindi

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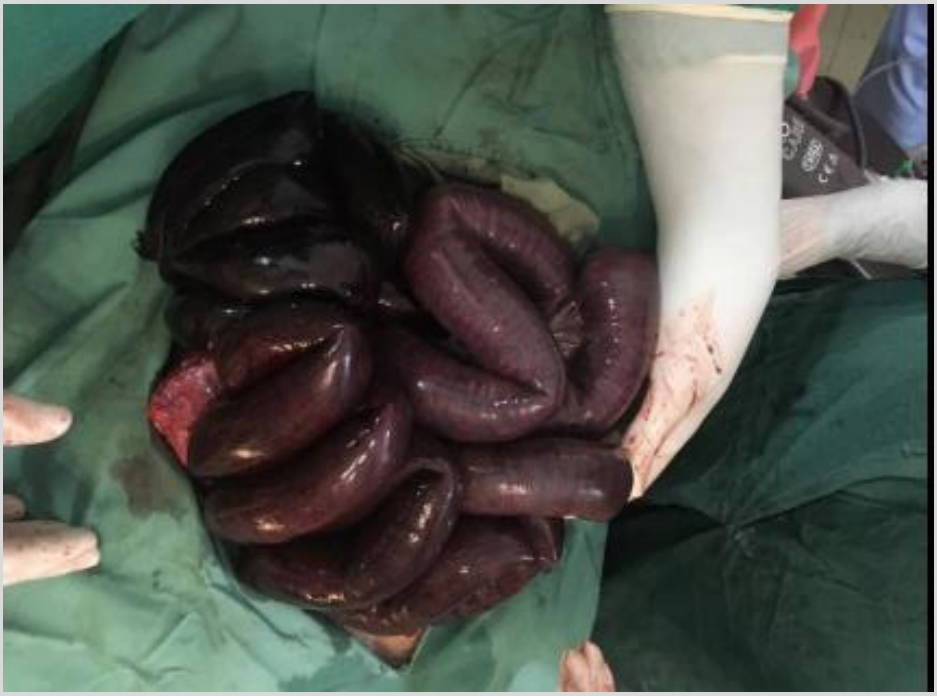

Description:

55 years old male, known case of IHD presented with complaints of pain abdomen for 02 days along with history of relative constipation followed by diarrhoea and nausea for 01 day. On examination, there was blood-stained finger. After optimisation patient proceeded with exploratory laparotomy which revealed gangrenous gut for which reservation and ileocolostomy was done.

Intussusception

Author:

Dr. Ayesha Huma

PGT, General Surgery Unit 2, Holy Family Hospital, Rawalpindi

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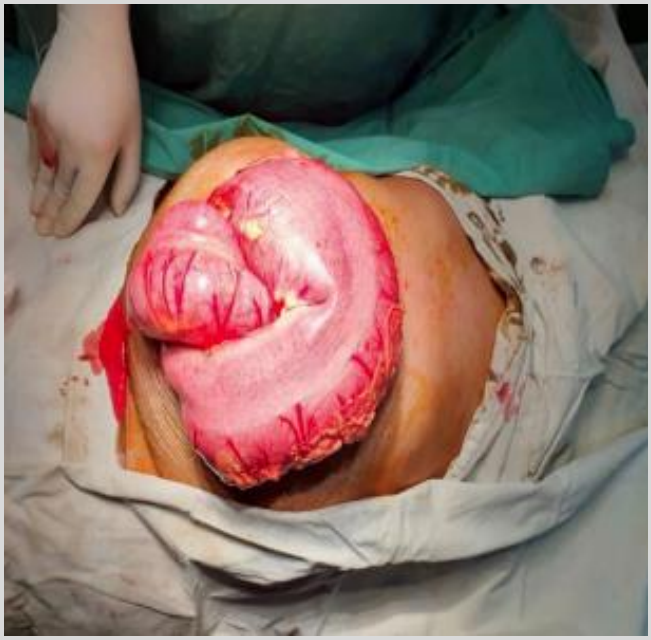

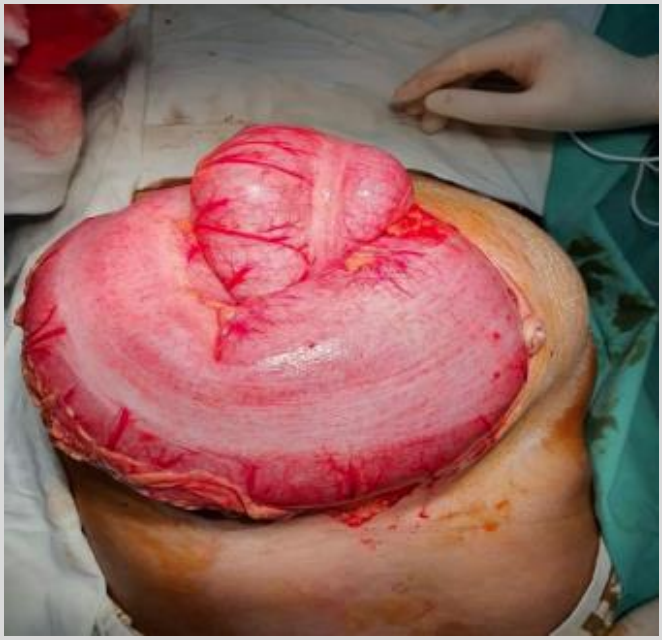

Description:

A 42-year-old female presented in surgical emergency with complaints of pain in abdomen, absolute constipation, vomiting and nausea for 2 days. She initially remained admitted in AJK for 24hrs then she was referred to HFH

O/E Pulse 120 Bp 80/50 RR 32/min Abd: tense generalised tenderness

Underwent surgical exploration after Resuscitation n initial workup Per operative, intussusception involving small and large gut was found. Post operatively she remained on ventilatory support for 24hrs.

Hydatid Cyst

Author:

Dr.Muhammad Hamza[1]

Dr. Noor Fatima[1]

[1]PGT, General Surgery Unit 2, BBH, Rawalpindi

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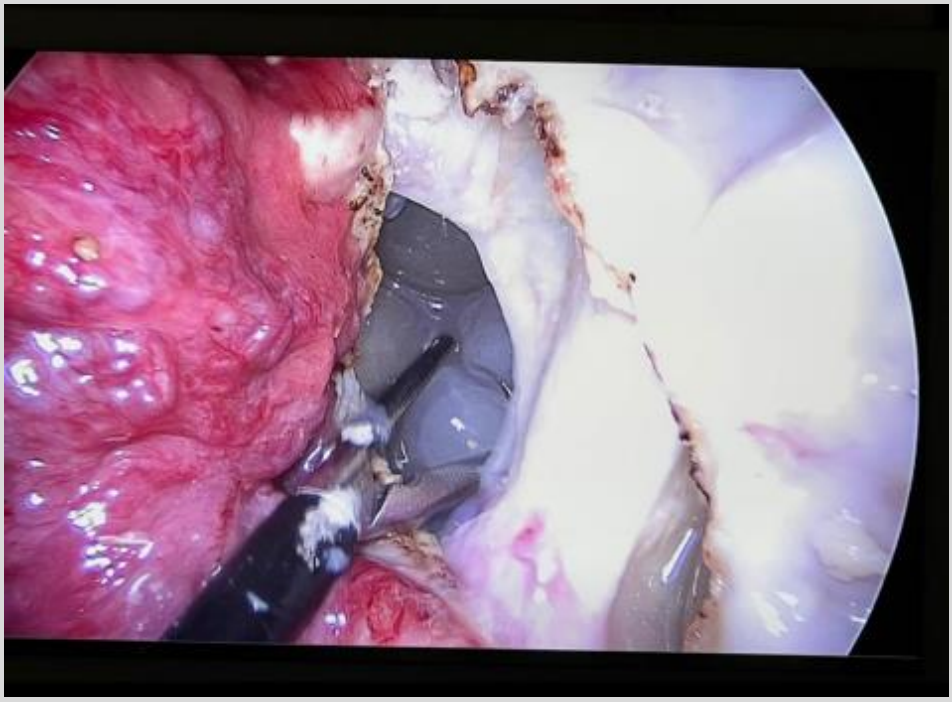

Description:

There was a large hydatid cyst adherent densely to the bladder + Left ovary + Left fallopian tube. 1 large and 1 small cyst in Left hypochondrium. Laparoscopic marsupialization of hydatid cyst and drain placement was done.

Diverticula of Jejunum

Author:

Dr. Muhammad Hamza[1]

Dr. Noor Fatima[1]

[-1]PGT, General Surgery Unit 2, BBH, Rawalpindi

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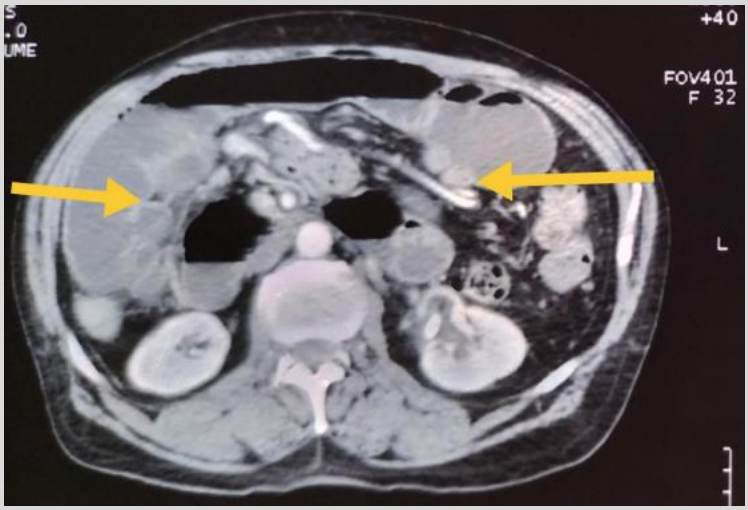

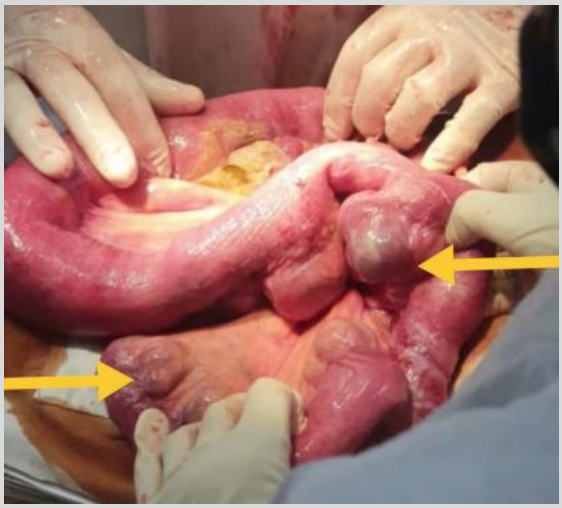

Description:

A middle-aged man presented with signs and symptoms of acute intestinal obstruction. Upon detailed investigation no obvious cause was identified. Patient was resuscitated and emergency laparotomy done. The cause of obstruction was a band that obstructed the lumen of the small gut. The patient had multiple diverticulae throughout the whole length of jejunum that became prominent because of obstruction. No perforation was found. Hence band was released, gut decompressed, and abdomen closed. Patient had uneventful post operative recovery.

Attached here is a per operative picture of the diverticulae and CT scan showing prominent bulges indicating diverticulae.

Craniofacial Duplication

Author:

Dr. Aqeela Jabeen

PGT, Paediatric Medicine, Holy Family Hospital, Rawalpindi

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Resident Journal of Rawalpindi Medical University (journalrmc.com)

Description:

Patient presented with craniofacial duplication in last year in peads dept HFH from some peripheral hospital. Multidisciplinary approach for management started involving neurosurgeon, paediatrician, paediatric surgeon, and ENT specialist. However, patient could not revive and expired after few days.

CASE REPORT

Fibroid Uterus

Author:

Dr. Makhduma Naqvi

-PGT, General Surgery Unit 2, Lady Aitcheson Hospital

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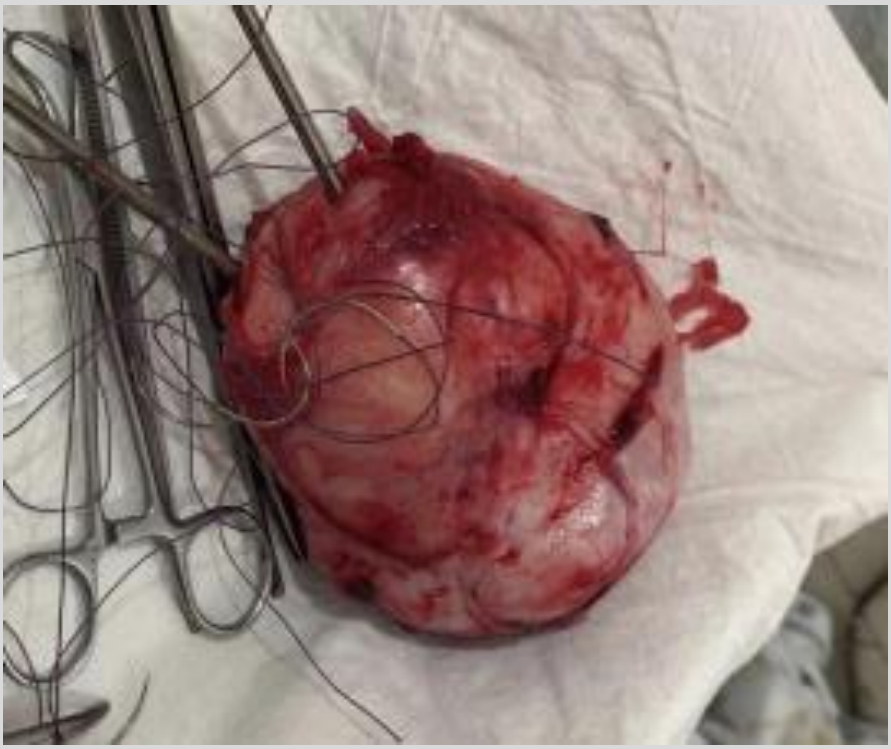

Description:

Patient 45 years age presented with heavy irregular painless bleeding. On scan fibroids of size 12×10cm was diagnosed. Medical treatment was done but symptoms were not relieved. Surgery was planned and hysterectomy was done.

Empyema Gallbladder

Author:

Dr.Ayesha Huma

-PGT, General Surgery Unit 2, Holy Family Hospital, Rawalpindi

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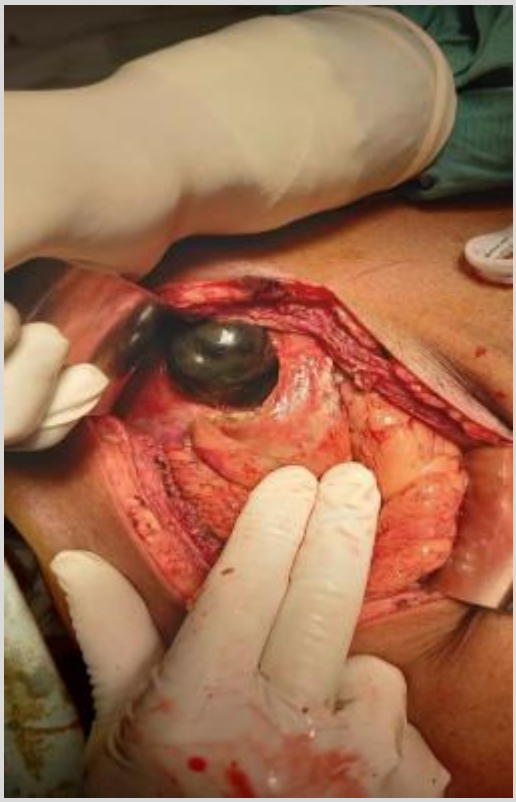

Description:

A 55 years of age female, resident of Rawalpindi, presented in surgical emergency with complaints of pain in RHC, vomiting and fever from last 3 days. Patient was known diabetic and hypertensive as well as dated case of cholelithiasis. On examination, tense, tender RHC with epigastric fullness. She underwent surgical exploration which showed empyema gallbladder.

Axillary Artery Repair Using Reverse Saphenous Graft

Author:

Dr. Saeed Khan

PGT, General Surgery Unit 2, Holy Family Hospital, Rawalpindi

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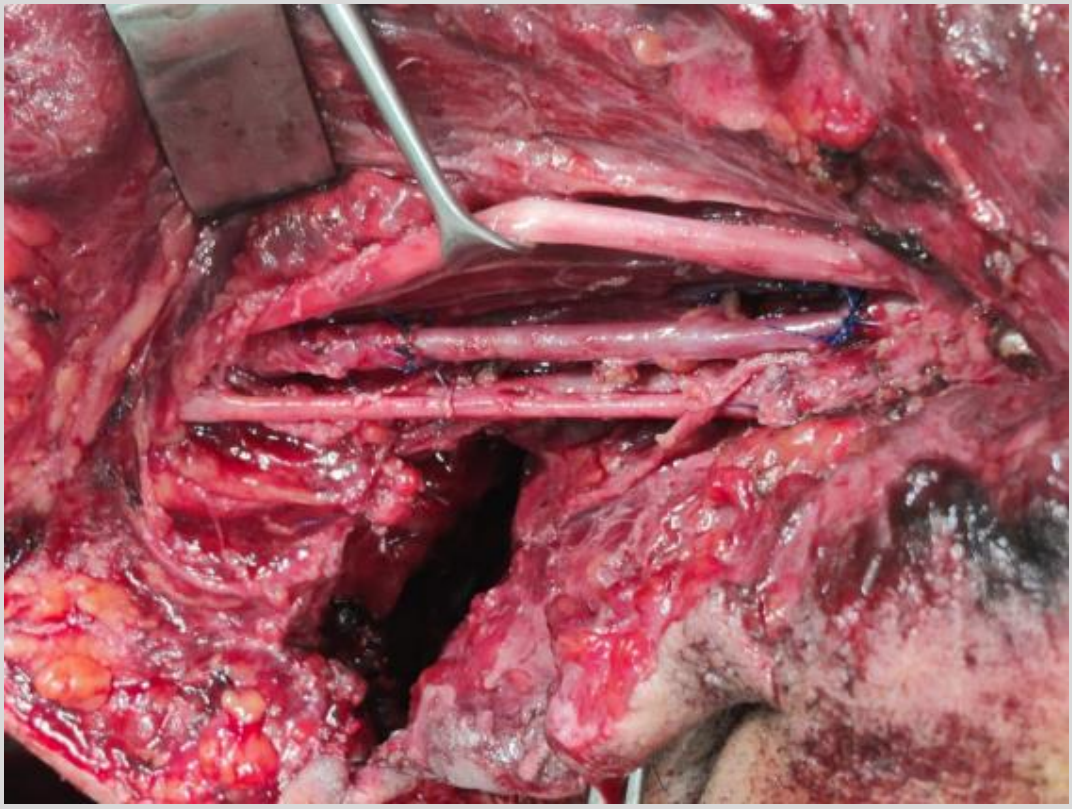

Description:

Patient presented with firearm injury and there was damage to axillary artery which was repaired using reverse saphenous graft.

Absent Nose

Author:

Dr. Aqeela Jabeen
PGT, Pediatric Medicine, Holy Family Hospital, Rawalpindi

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Description:

A patient presented in NICU of Peads department with absent nose. Surprisingly, patient was maintaining saturation at room air after 02 days of oxygen inhalation. Later on, ENT department and plastic surgeons were involved, and patient was referred for nasal surgery

T

Testicular Torsion

Author:

Dr. Ayesha Huma
Postgraduate trainee General Surgery Unity 2, Holy Family Hospital, Rawalpindi

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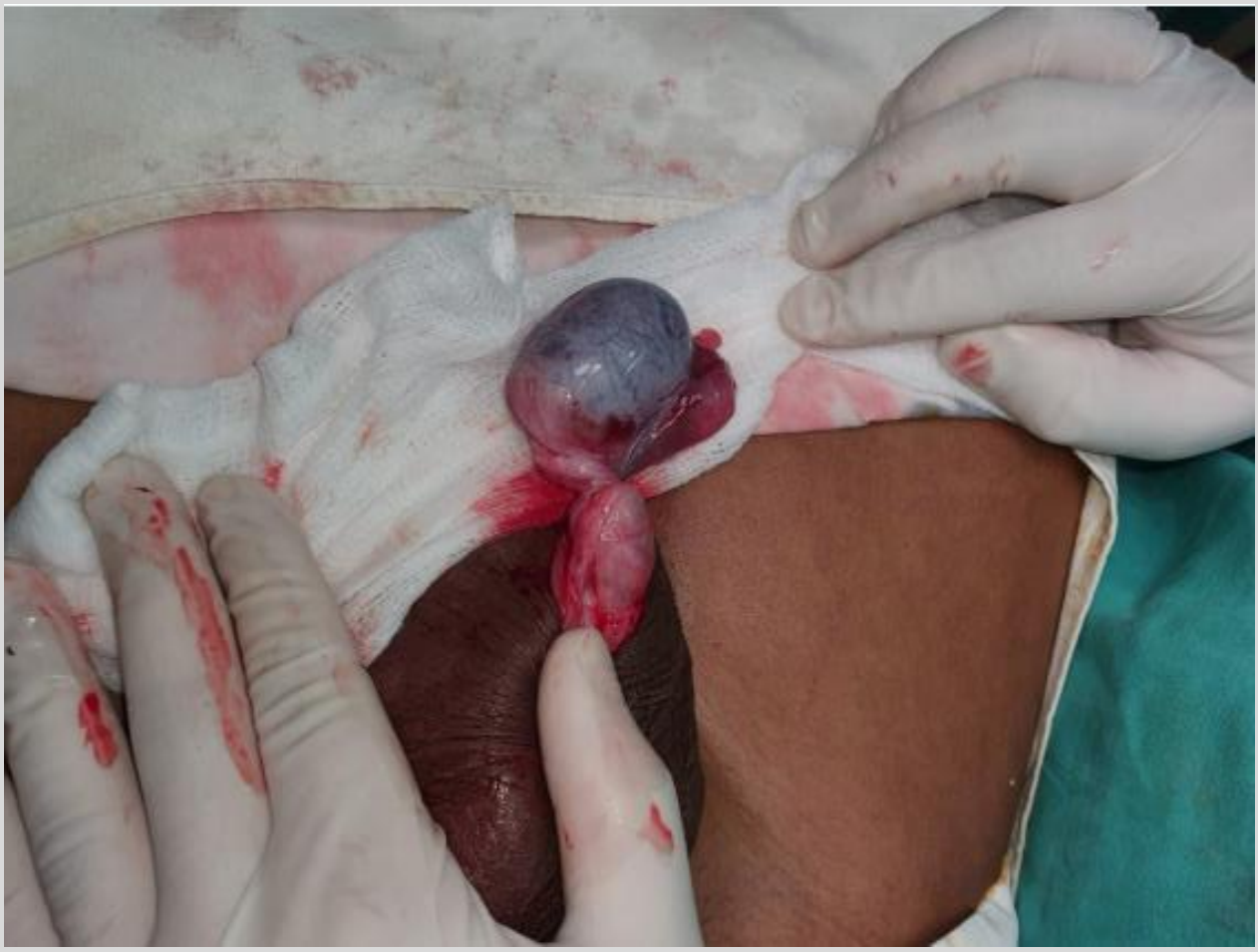


Description:

A 20 years of age male presented in surgical emergency, 10 hours after history of fall from bike with complaints of pain and swelling in scrotal region. O/E Warmth erythematous, tender to touch scrotal sac with right testis not palpable and pain was not relieved by elevation. Urgent surgical exploration done with per operative findings of Testicular torsion for which Orchidectomy and orchidopexy was done.

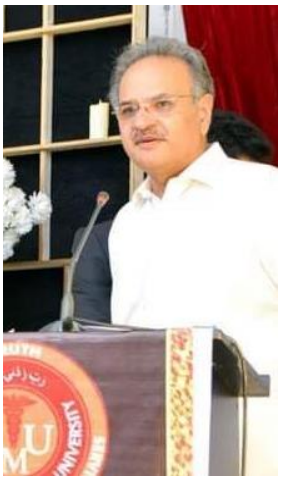
Oath Taking Ceremony 2022

The 2nd oath taking ceremony of the new council of RRF (2022-2023), and farewell of the previous council (2021-2022) was held on Sunday, April 24 2022

Our worthy Vice Chancellor and Patron in chief Prof. Dr. Muhammad Umar (SI) and Patron in charge Prof. Dr. Naeem Zia graced the event with their presence. The new council took their oaths, and RRF bade farewell to the previous council, while appreciating and acknowledging their efforts. Shields and certificates were distributed among the executive members RRF, the high achievers and the participants.

Oath Taking Ceremony 2022

Oath Taking Ceremony 2022


Few glimpses of high achievers from previous year 2021-2022 receiving their certificates from Prof. Dr Bushra Khaar and Prof. Dr Naeem Zia.

RRF Executive Council 2022-2023

Team Media & Publication

Team RJRMU

Team Event Management

First official meeting of executive council RRF22 and RSRS 22 with our worthy Vice Chancellor Prof Dr Muhammad Umar , Prof Dr Naeem Zia, Prof Arshad Sabir and Dr Afifa was held today at Academic council NTB. Yearly plans , agendas and updates regarding coming research projects, workshops and webinars were discussed.

Resident Research Forum welcomed Dr. uzma Hayat as cheif coordinator RRF. Dr uzma is working as incharge Research department RMU. She is being supervising all synopsis, BASR , thesis writing, RSRS and all research related activities at RMU and has brought the research cell towards new horizons in such a short tenure. Dr uzma has the honour of being part of HEC and now we welcome her as CHEIF COORDINATOR RRF

CLINICAL AUDIT INITIATIVE AND QUALITY IMPROVEMENT PROJECTS

Surviving Sepsis Campaign

SEPSIS ON THE FLOOR

EARLY & ACCURATE DIAGNOSIS

OCTOBER 2022

Prof. Dr. Muhammad Umar
(Patron in Chief)

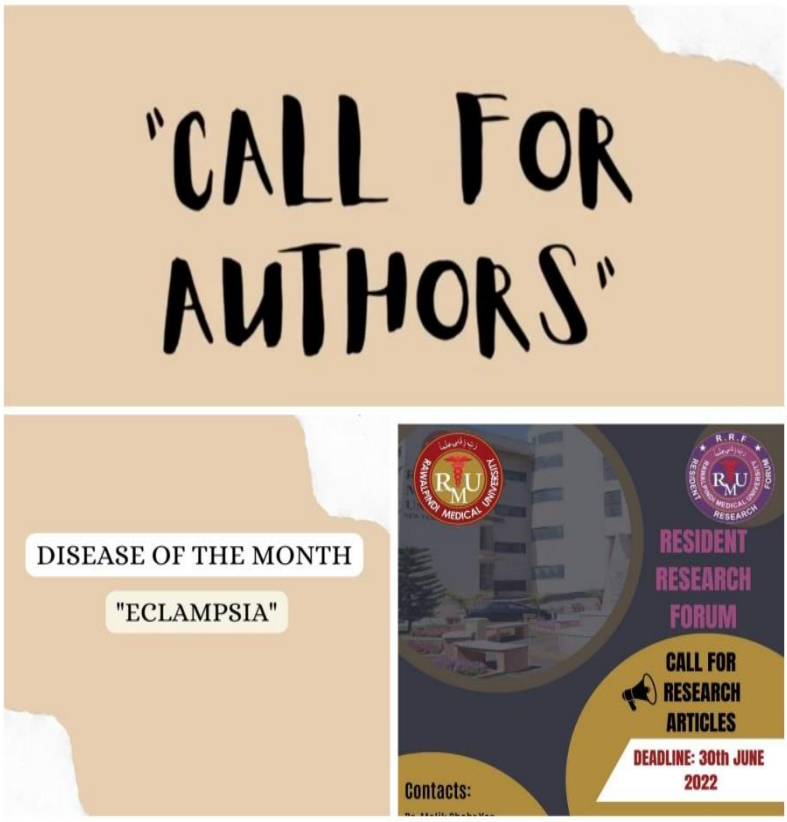
Prof. Dr. Naeem Zia
(Patron in Charge)

Dr. Bilal Mirza
(Facilitator)

Dr. Uzma Hayat
(Chief Co-Ordinator)

Clinical audit and quality improvement projects presented first session on surviving sepsis campaign and the topic was " surviving sepsis on surgical floor" 5th October 2022 under the mentorship of Dr. Bilal Mirza one of the pioneers of clinical audit at Pakistan

RRF proudly announced submission of Disease of the month "COLORECTAL CARCINOMA" for peer review and Publication and It was a great achievement on behalf of RRF .



Resident Journal Of RMU is recognised by Rawalpindi Medical University and already 2 editions of the Journal - RJRMC - have been published.

RRF called for submission of research articles, case reports, review articles and case series. Authors for Disease of the month

Few glimpse from 2nd Official meeting of team RRF 22' with Chairman RRF Prof Dr Naeem Zia, progress for coming year projects was discussed and Chairman RRF appreciated active participation of residents.Future plans for coming months were mapped out.

RRF announced RJRMU availability online with following link http://Supp.journalrmc.com

RRF announced the first ever Residents Research Directory at RMU. It was a great achievement of RRF for meeting one of its targets as per annual implementation plan.

Resident research forum conducted first workshop of Clinical audit campaign at RMU under the umbrella of RRF. First session was conducted on "sepsis on surgical floor" by one of the pioneers of clinical audit at Pakistan Dr Bilal Mirza , Associate professor paediatric surgery, Children Hospital Lahore. The event was graced by our worthy Vice Chancellor and patron in chief RRF Prof. Dr Muhammad Umar, our executive council, auditors from surgery allied departments and our student associates.

5th Annual Resident Research Conference Report, Rawalpindi Medical University 16th Dec 2022

The tradition continues ; Rawalpindi Medical University hosted its 5th Annual Resident Research conference on 16th December 2022 , 0930-1530 Hrs. The event took place in the inherently beautiful main campus of the University. Chief Guest Prof Asif zafar and Guest of honor , Prof Faisal Bhopal were received by worthy Vice Chancellor Prof Mohd Omer and Prof Naeem Zia. The guests moved to the lecture theatre complex , Hall 1 for the inaugural session. The inaugural lasted for about one and half hour with 150+ attendees comprising of all three University hospital Residents and honorary senior faculty. It started off with the recitation followed by national anthem and prayers for APS martyrs. Annual Resident research forum report was also presented by the president Dr Noor Ul Sabah Butt for the esteemed guests and attendees. It was followed by some memorable remarks by our worthy Guests and patrons. After that Scientific session commenced in all the four halls of the lecture theatre complex.

Total abstract received by deadline of 5th December were 168, out of which 16 were rejected as they didn't match the eligibility criteria. Twenty seven participants had pre registered themselves while 113 participants registered on spot via our registration desk. Each hall hosted a three hour long session with fifteen minute break. The presentations were divided in four main categories that were innovation, medicine and allied, surgery and allied, Gynaecology and obstetrics. A total of 99 oral presentations and 48 poster presentations were expected. Some of 2

the participants could not join us due to unforeseen circumstances. Senior faculty members belonging to different specialities graced the sessions as Panels of Experts. The presentations were judged according to a standard criterion which made sure that each basic component of their research work is assessed. A total of 13 positions were announced in oral category and three positions in the poster category. All the presenters from innovative category were accolades with special award. Surgical Unit 2 I, Benazir Bhutto Hospital bagged the prize for the most abstract and the best abstract. The sessions ended with pearls of wisdom by our worthy judges. A dinner has been planned by the office of Vice Chancellor for all the winners, executives and organisers which will definitely boost the developing research culture in the university.

5th Annual Resident Research Conference Report, Rawalpindi Medical University 16th Dec 2022