

# Pattern of Surgical Procedures in Emergency Department of Allama Iqbal Memorial Teaching Hospital Sialkot

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## ABSTRACT

**Objective:** To study the pattern of surgical procedures in emergency department of Allama Iqbal Memorial Teaching Hospital, Sialkot.

**Study Design:** Descriptive / observational study

**Place and Duration of Study:** This study was conducted at the Allama Iqbal Memorial Teaching Hospital, Sialkot from July 2015 to July 2016.

**Materials and Methods:** Nine Hundred and ten surgical procedures were included in this retrospective study. All the surgical procedures were included, while cases that were shifted to other departments and those that left against medical advice were excluded. Age, sex, area, type of surgical procedures, was recorded on the designed Performa. Permission of Ethical Committee of the institute was taken. Data was analyzed on SPSS version 10.

**Results:** In this study the incidence of surgical procedure in emergency department was maximum (42.41%) 386 cases at the age group 15-25 years and minimum (0.21%) 2 cases at the age group 90 & above as shown in table no.01. There were (56.70%) 516 cases from male and (43.29%) 394 cases from female as shown in table no.02. The surgical procedures of the patients from urban population was (65%) 588 cases and (35%) 322 cases from rural populations as shown in table no.03. The incidence of open appendectomy was at the top (11.20%) 102 cases in male and (15.27%) 139 cases from female and there was lowest incidence (0.1%) 1 in case of chest intubation, tendon repair, vascular repair, and exploratory laparotomy for gun shot in female patients as shown in table no.04. There were (10%) 91 cases from male and (9.45%) 86 cases from female of emergency excision of soft issue lesions, (10.10%) 92 cases from male and (8.13%) 74 cases from female in case of incision and drainage procedure. The exploratory laparotomy for typhoid perforation, duodenal ulcer, stab wound and blunt abdominal trauma was the second most common procedure carried out at the surgical emergency department of Allama Iqbal Memorial Teaching Hospital, Sialkot as shown in table no.04.

**Conclusion:** The results of this study are helpful in planning better emergency service delivery to patients and in focusing and improving the training of surgical residents. Government at various levels should provide modern diagnostic tools for the accurate preoperative diagnosis of surgical emergencies in tertiary care public hospitals.

**Key Words:** Surgical Procedures, Emergency, Retrospective.

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## INTRODUCTION

An expected population in Pakistan has of 173.5 million (July 1, 2010), which is developing at a rate of 2.05% for every annum and has a country versus urban dissemination of 64% versus 36%.<sup>1</sup> Total enrolled medical professionals (fundamental and experts) in Pakistan till May 31, 2010 are 142792 (119083+23709), making specialist to-populace proportion of 1:12150.<sup>2,3</sup>

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General surgery is a noteworthy claim to fame managing high volumes of crisis affirmations, their management.<sup>1</sup> In showing doctor's facilities crisis surgical care is of high need in tertiary care setup and it is a vital part of preparing surgical occupants. There is a consistent increment in the quantity of crisis admissions<sup>2</sup> which incorporate surgical emergencies.<sup>3</sup> Many reviews have watched the example of crisis surgical admissions<sup>4,5</sup> and crisis surgeries.<sup>6</sup> However, there is little information accessible on range of the crisis general surgical calls worldwide and writing look demonstrated that no review has been led or reported in regards to the available to come back to work-stack in Pakistan. Actually, there is a more noteworthy workload of the crisis surgical group than uncovered by examining surgical affirmations and operations alone. Bureau of surgery Allama Iqbal Memorial Teaching Hospital, Sialkot involves two general surgery units other than the strengths of neurosurgery and

orthopedics; the offices of pediatric surgery, urology and plastic surgery are additionally present. The two surgical units have 50 beds each, with equivalent circulation of outpatient, operation and crisis days. As Allama Iqbal Memorial Teaching Hospital, Sialkot is an open setup it additionally pulls in patients from other low-wage regions of Sialkot city and country region. Lion's share of patients has a place with low financial gathering.

The example of surgical crises changes with the geological regions, in various races, age gatherings, social classes and in individuals with various occupations. Not very many neighborhood studies are accessible on the study of disease transmission, example of sicknesses and frequency of a specific ailment predominant in the city, territory and the nation. This review was done to discover the example of surgical crises overseen in crisis operation theater.

## MATERIALS AND METHODS

Nine Hundred and ten surgical procedures were included in this retrospective study. All the surgical procedures were included, while cases that were shifted to other departments and those that left against medical advice were excluded. Age, sex, area, type of surgical procedures, was recorded on the designed Performa. Permission of Ethical Committee of the institute was taken. Data was analyzed on SSPS version 10.

## RESULTS

**Table No. 1: Age Distribution in Surgical Emergencies**

Sr.No	Age (Years)	Cases	Percentage %
1	15-25	386	42.41
2	26-36	148	16.26
3	37-47	151	16.59
4	48-58	123	13.53
5	59- 69	81	8.91
6	79-89	19	2.09
7	90 & above	2	0.21
	Total	910	100

**Table No. 2: Gender Distributions in Surgical Emergencies**

Sr No	Gender	Cases	Percentage %
1	Male	516	56.70
2	Female	394	43.29
	Total	910	100.0

**Table No. 3: Area Distributions in Surgical Emergencies**

Sr No.	Area	Cases	Percentage %
1	Urban	588	65.00
2	Rural	322	35.00
	Total	910	100.0

In this study the incidence of surgical emergencies was maximum (42.41%) 386 cases at the age group 15-25 years and minimum (0.21%) 2 cases at the age group 90 & above as shown in table no.01. There were (56.70%) 516 cases from male and (43.29%) 394 cases from female as shown in table no.02. The surgical emergencies were from urban population (65%) 588 cases and (35%) 322 cases from rural populations as shown in table no.03.

**Table No.4: Type of Surgical Emergencies**

Sr No	Type of Surgical Emergencies	Male (%)	Female (%)
1	Open Appendectomy (positive)	102 (11.20%)	139 (15.27%)
2	Exploratory Laprotomy for Typhoid Perforation	10 (1.1%)	5 (0.54%)
3	Excision of Soft Tissue Lesions	91 (10%)	86(9.45%)
4	Diabetic foot Debridement	36(3.95%)	25(2.74%)
5	Chest intubation	32(3.51%)	01(0.10%)
6	Tendon Repair	18(1.97%)	01(0.10%)
7	Hemostasis+ vascular repair	06(0.65%)	01(0.10%)
8	Simple Sutures	02(0.22%)	01(0.10%)
9	Exploratory Laparotomy	02(0.22%)	04(0.43%)
10	Foreign body	22(2.41%)	07(0.76%)
11	Below Knee Amputation	04(0.43%)	03(0.32%)
12	Exploratory Laparotomy for Duodenal Ulcer	12(1.31%)	06(0.65%)
13	Exploratory Laparotomy for Gunshot	10(1.1%)	01(0.10%)
14	Exploratory Laprotomy for Stab	05(0.54%)	02(0.22%)
15	Exploratory Laprotomy for Blunt Abdominal Trauma	04(0.43%)	02(0.22%)
16	Herniorraphy	11(1.20%)	03(0.32%)
17	Excision of Carbuncle	03(0.32%)	07(0.76%)
18	Incision and Drainage	92(10.10%)	74(8.13%)
19	Debridement	51(5.60%)	29(3.18%)
	<b>Total</b>	<b>513(56.37%)</b>	<b>397(43.62)</b>

The incidence of open appendectomy was at the top (11.20%) 102 cases in male and (15.27%) 139 cases and there was lowest incidence (0.1%) 1 in case of chest intubation, tendon repair, vascular repair, and

exploratory laparotomy for gun shot in female patients as shown in table no.04. There were (10%) 91 cases from male and (9.45%) 86 cases from female of emergency excision of soft tissue lesions, (10.10%) 92 cases from male and (8.13%) 74 cases from female in case of incision and drainage emergency. The exploratory laparotomy for typhoid perforation, duodenal ulcer, stab wound and blunt abdominal trauma was the second most common emergencies received at the surgical emergency department of Allama Iqbal Memorial Teaching Hospital, Sialkot as shown in table no.04.

## DISCUSSION

Results of this study showed that the (50%) cases presented in emergency department were of general surgery. The appendicitis is the most frequent abdominal emergency world wide.<sup>7</sup> In our study also, the most frequent specific diagnosis made is appendicitis.

The most frequent operation performed was appendectomy 102 (11.20%) patients in male and 139 (15.27%) in female. The same trend was also seen in other cities<sup>6,8</sup> The commonest operations were appendectomy (27%), incision drainage (19%), debridement (09%), laparotomy (10%), herniorrhaphy (2%), below knee amputation (1%), tendon repair (2%) vascular repair (1%), excision of soft tissue lesions (19.45%), diabetic foot debridement (6%) foreign body (3%) and chest intubation was (4%).

The captain of the trauma team is general surgeon. The Advanced Trauma and Life Support (ATLS) guidelines and recommendations of the Royal College of Surgeons of England state that a trauma team should include a general surgeon.<sup>10,11</sup> However, only a minority of all trauma patients require assessment for abdominal and vascular injuries by a general surgeon, with even fewer requiring surgical intervention.<sup>12</sup> A study<sup>13</sup> showed that general surgeons assessed 30.1% trauma call patients; only 12.3% patients were admitted under the general surgeons. 9.6% patients required operative surgical intervention, while 2.7% patients were admitted for observations. In another study,<sup>12</sup> trauma comprised approximately 2% of the overall general surgical emergency workload in which general surgeons were involved in the assessment of 25% of severely injured patients, out of which less than 10% patients needed surgery.

A study<sup>14</sup> performed to find out the 'Unseen' on-call workload of a general surgical team showed that up to 5.5 hours per day on-call was spent assessing referrals. These studies have reinforced our observation that there is a greater workload than revealed by audit of just surgical admissions and operations alone.

Another study<sup>16</sup> reported on-call night activity of surgical resident and concluded that it consists

primarily of activities of daily living, patient evaluation, and communication.

It was also reported<sup>17</sup> that when heart rate is used as an indicator of combined physiologic and psychologic stress, surgical residents achieve stress levels of tachycardia "on call." Surgical residents also exhibit an increase in circulating WBC count "on call."

## CONCLUSION

The major workload of an on-call surgical emergency team deals with the acute conditions of abdomen with appendectomy being the most frequent operation performed. The results of this study are helpful in planning better emergency service delivery to patients and in focusing and improving the training of surgical residents. Government at various levels should provide modern diagnostic tools for the accurate preoperative diagnosis of surgical emergencies in tertiary care public hospitals. These measures will help to improve the management and outcome of surgical emergencies.

### Author's Contribution:

Concept & Design of Study:	Nimra Ikram
Drafting:	Nimra Ikram
Data Analysis:	Imran Idris
Revisiting Critically:	Kamran Hamid
Final Approval of version:	Nimra Ikram

**Conflict of Interest:** The study has no conflict of interest to declare by any author.

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