ORIGINAL RESEARCH

An Analytical Study on Surgical Emergencies in Rural Medical College Hospital

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Received: 16 February, 2022 Acceptance: 28 March, 2022

ABSTRACT
Background: The common Surgical emergencies encountered in India and worldwide are Perforation of viscus, Peritonitis, Bowel obstruction, Ischaemia of the Bowel, Acute appendicitis and Renal caliculi and Urinary obstruction. At least 62% of surgical operations performed are for emergencies. There is little information regarding the clinical spectrum and outcome of emergency abdominal operations for, specialized units in India. The major causes of abdominal emergencies vary from region to region and even with in the same region socioeconomic, cultural geographical factors may affect the pattern. **Aim of the Study:** To know the pattern of surgical emergencies in teaching hospital. **Materials and Methods:** We have conducted this study for 9 months in the department of General Surgery, Gouri Devi Institute of Medical Sciences & Hospital, Durgapur, West Bengal, India. **Results:** We have conducted this study in 170 total number of patients. Out of these 170, males are 82, females are 56 and children are 32. 29 patients died because of various reasons. **Conclusion:** Surgical emergencies are very common in India and worldwide, in rural past of India the mortality is very high. Early diagnosis and early intervention can reduce the mortality and morbidity.

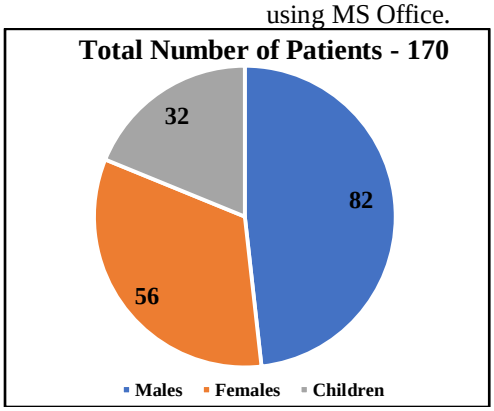
Keywords: Perforation, Intestinal obstruction, Abdominal Infections, Penetrating injuries, Mortality.

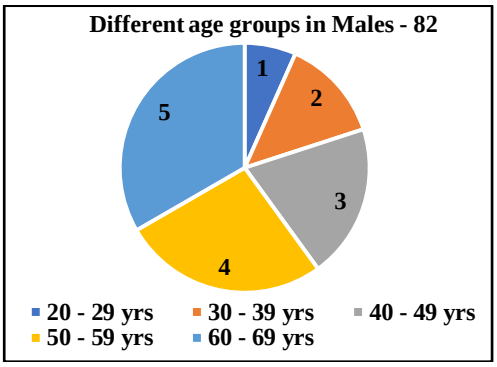
INTRODUCTION
Surgical emergencies are commonly encountered in surgical practice. General surgical emergencies commonly seen in first and second level hospitals are Acute appendicitis, Intestinal obstruction, Peritonitis, Cholecystitis, Bleeding peptic ulcer, Acute pancreatitis, Renal caliculi and Retention of urine. Among children, appendicitis and torsion of testis and sigmoid volvulus. Males are more commonly affected than females.[1] The traumatic conditions are Lacerated liver, Ruptured spleen, Perforation of visceral organs because of penetrating injuries. The annual death rate from surgical emergencies in united states in 1935 was 38 per 100,000 population or 3% of all deaths in that year. In western countries all general surgical emergencies are responsible for 3% to 5% deaths. Strangulated Inguinal hernias are common in Sub Saharan Africa, 4 in 1000 hernias can become strangulated, if untreated these hernias can become gangrenous with in several hours. Acute appendicitis is rare in villages, but increasingly common with development and more western diet containing less fibre and more meat. Appendicitis is common in urban areas than rural areas. Removal of an inflamed appendix is a straightforward procedure. Even in late cases complicated by perforation and abscess formation, drainage will resolve the acute problem unless generalized perforation has developed.[2] Intestinal obstruction caused by adhesions, volvulus, worm infection or intussusception. The common causes areinguinal hernia, less commonlythe lower end of the large intestine can spontaneously twist on itself (sigmoid volvulus), producing on obstructed bowel. The common cause of intestinal obstruction in children is heavy infestation with ascaris worms can lead to bells of living worms large enough to obstruct the lumen.[3] Another common causeisseptic infection with abscess and perforated peptic ulcer and bleeding from oesophageal varices, Acute inflammation of gall bladder, acute cholecystitisand urinary obstruction by stones and masses.[4]Global health policies have not accorded provision of emergencymedical services the desired attentionespecially in low- and medium-

income nations. In these countries, prevention of communicablediseases and reduction of maternal mortality are givengreater priority. In advanced countries, prompt emergency medicalcare is provided through well-organized social insurance systemsin addition to efficient pre-hospital and hospital medical attentionby well-trained and well-equipped paramedical and medicalpersonnel.

MATERIALS AND METHODS

This study has been conducted for 9 months in the department of General surgery, Gouri Devi Institute of Medical Sciences & Hospital, Durgapur, West Bengal, India. Consent has been obtained from the patient'srelatives by giving consent form in their local language. After obtainingcomplete history, all the patients were examined in detailed and advised investigations. The investigation advised are complete blood picture, random blood sugar, blood urea, serum creatinine, serum electrolytes, ultrasound abdomen, CT Scan abdomen, bold grouping and cross matching and special investigations like endoscopy, urethroscopy. After collecting the data, it has been compelled in systematic manner and computerized by using MS Office.





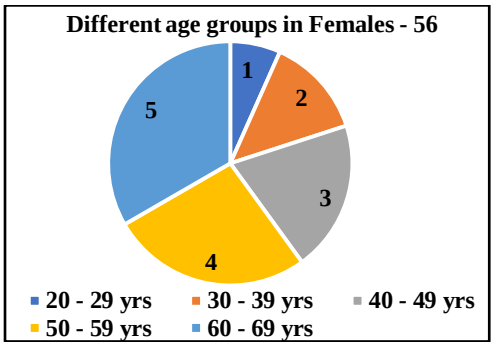


Table 1: Total number of patients Age Wise

Age in Years	No. of Patients (M) - 82	No. of Patients (F) - 56
20 – 29 yr	15 (18.29%)	10 (17.85%)
30 – 39 yr	12 (14.62%)	7 (12.5%)
40 – 49 yr	10 (12.19%)	9 (16.07%)
50 – 59 yr	27 (32.92%)	16 (28.57%)
60 – 69 yr	18 (21.94%)	14 (25.2%)

Table 2: Total number of Children Age Wise

Age in Years	No. of Children (32)
4 – 8 yr	14 (43.75%)
9 – 12 yr	10 (31.25%)
>12 yr	8 (25.0%)

Table 3: Different Causes of Surgical Emergencies

Causes	No. of Patients (M) – 82	No. of Patients (F) - 56
Acute Appendicitis	21 (25.62%)	8(14.28%)
Peritonitis	18 (21.95%)	7 (12.5%)
Intestinal Obstruction	14 (17.07%)	14 (25.0%)
Renal Colic	19 (23.17%)	13 (23.21%)
Acute Cholecystitis	7 (8.53%)	8 (14.28%)
Others	3 (3.65%)	6 (10.71%)
Mortality	21 (25.62%)	8 (14.28%)

Table 4: Common Clinical Features

Clinical Features	No. of Patients (M) 82	No. of Patients (F) 56
Pain abdomen	79 (96.25%)	48 (88.53%)
Distention of abdomen	71 (86.58%)	45 (80.87%)
Constipation	43 (52.43%)	28 (50.0%)
Fever and Vomiting	72 (87.80%)	51 (91.07%)
Oliguria and Others	26 (31.70%)	12 (21.42%)

RESULTS AND DISCUSSION

We have included total no.of 170 patients in this study. Out of these 170 patient's male patients were 48.23%, female patients were 32.94% and children were 18.82% (82; 56; 32 in no respectively). The study conducted by C.K. Ofoegbu, T. Odi etal shows male patients were 59.5%.[5] The common age group affected is 6th and 7th decade (53%), whereas traumatic emergencies are common in young age group. The cases like intestinal obstruction and perforation peritonitis are more common in old age people. Among children the common age group involved is between 4-8 years. The common diseases affected are ascaris's worm infestation and torsion of testis and some urinary abnormalities.[6] Different causes of surgical emergencies are acute appendicitis, 25.62% in males and 14.28% in females; peritonitis was observed in 29.95% in males and 12.5% in females; intestinal obstruction in 17.7% of males and 25% of females; renal cholic and urinary retention was seen in 23.7% of males and 23.17% of females and acute cholecystitis 8.53% of males and 14.28% of females and mortality is in 25.62% of males and 14.28% of females and mortality is due to delay in reaching the hospital, comorbid conditions like diabetes, coronary artery disease, renal failure and massive bleeding. The studies conducted by N.A. Ibrahim, M.A. Oludaraetal shows, appendicitis in 31.64%; peritonitis is 26.5% and intestinal obstruction in 22.3% and is 26.5% and intestinal obstruction in 22.3% and renal colic and retention of urine is 26.3%.[7] The common clinical features are pain abdomen 96.25%; destruction of abdomen in 86.58%; constipation 52.45%; fever and vomiting's 87.65% and oliguria and others in 31.70% of cases. The study conducted byS.B. Naaeder, E.Q. Archampongetal shows almost similar results.[8] Acute abdomen and urological emergencies werethe leading nontrauma emergency conditions. Acute urinaryretention constituted 70% of the urological emergencies while 53%of the malignancies were breast cancer. Acute appendicitis/perforated appendix and intestinal obstruction were the most frequent indications for surgery. Peritonitis followed perforated peptic ulcer in 16 patients(7.2%) Peritonitis from perforated typhoid ileitis was seen only inone patient. Surgical emergencies represent more than 50% of surgical admissions and constitutes a major part of the surgery's workload is most parts of the world. Percentage of non-trauma surgical emergencies Is reported to be between 32% and 55% and more than 60% requires surgical intervention. 20% to 34% of death noted in one study conducted in Nigeria.[9] Acute abdomen which includes acute appendicitis, peritonitis, intestinal obstruction, urinary retention, non-trauma neuro surgical, are the leading causes of non-trauma surgical emergencies who are referred have worse outcome than those with similar diagnosis who are directly admitted to the tertiary centre. Studies have shown that most of the developing countries especially Sub-Saharan Africalacks sufficient infrastructure to carry out what is deemed by the world health organization to be essential for the provision of emergency and essential surgical care with majority lacking adequate basic infrastructure and capacity to provide 24-hour emergency surgical care.[10] The spectrum of surgical diseasesto change especially in low- and medium-income countries due to increasing in ageing of population and urbanization for acute abdomen constituted two thirds of non-

trauma operations with acute appendicitis / ruptured appendix and intestinal obstruction being the most common diagnosis. Studies shows that surgery for acute appendicitis was the most frequent non trauma emergency procedure. Complicated Hernia is most frequent cause of intestinal obstruction in our study, peritonitis resulting from typhoid infection is becoming rare. Availability of potent antibiotics, improved sanitation and availability of safe drinking water may be responsible for this observation. Nearly 26% of deaths are from non-trauma related conditions. It is also reported that acute abdomen and advanced malignancy are the major causes of death. The study conducted byetalA. Adamu, M. Maigatarishows that acute abdomen 32.5%; urological emergencies 21.6%; Malignancies 13%. Majority of the patients (69%) of who presented late were referred from other hospitals.[11]By indication and timing, emergency surgical conditions arethe aspects of diseases which present acutely and therefore needsurgical intervention. It may be trauma or non-traumarelated. Acute abdomen is the most common condition in thisstudy.Urological emergencyfrom acute urinary retention is another frequent reason fornon-trauma admissions, coming second to acute abdomen inmany reports. Global increase in urological emergencieshas been observed. This is attributed to ageing population andincrease in benign prostatic hyperplasia; a common cause ofacute urinary retention. Malignancies are also becoming amore frequent cause of non-trauma surgical emergencies. Incidenceof malignant conditions especially breast cancer isincreasing in many developing countries. It is, therefore, expected that more cancer patients presenting with complications requiring urgent attention will be presenting to the emergency room. Surgery for acute abdomen constituted two thirds of non-traumaoperations with acute appendicitis/ruptured appendix and intestinal obstruction being the most common diagnosis. Inreports from institutions in this region and other parts of the world, surgery for acute appendicitis was the most frequent non-traumaemergency procedure. Complicated hernia is themost frequent cause of intestinal obstruction in our practice, similar to finding in a previous report from our institution. InSierra-Leone, intestinal obstruction due to complicated hernia wasthe most common indication for emergency abdominal surgery.Only one patient with perforated typhoid was seen during thestudy period. Peritonitis resulting from typhoid infection isbecoming rare among adults and children in Lagos. Improved sanitation, access to portable water and availability of potent antibioticscould be responsible for this observation.

CONCLUSION

Surgical emergencies are very common in India and worldwide, in rural part of India the mortality is very high. Non traumatic surgical emergencies like appendicitis, renal cholic, intestinal obstruction, are very common. And traumatic emergencies like penetrating injuries are common in young male patients. Early diagnosis and early intervention can reduce the mortality and morbidity.

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