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**ORIGINAL ARTICLE**

# Surgical Emergencies as Seen in a Private Hospital in Enugu, Nigeria

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**ABSTRACT**

*A retrospective study carried out at Trans Ekulu Hospital, South Eastern Nigeria, a privately owned specialized medical facility. Theatre records and case notes of patients who underwent emergency surgical treatment from 1993-2008 were studied. An assessment of the outcome of treatment they received was also made with respect to mortality.*

*A total of 3712 patients were seen, and out of these 281 cases (7.6%) were emergencies; comprising 178 males and 101 females, with a male to female ration of (1.78:1). The ages of these patients ranged from 1year to 94years with a mean age of 34years). The 3 commonest emergency conditions encountered were appendicitis, intestinal obstruction and acute retention of urine from prostatic obstruction,*

*Acute abdomen was caused by several different lesions, but perforation of the ileum by typhoid enteritis was the commonest followed by duodenal perforation caused by peptic ulceration. These patients underwent laparotomy after adequate resuscitation by nasogastric decompression, administration of isotonic intravenous fluids and antibiotic therapy. Once the abdomen was opened, the lesions were dealt with accordingly.*

*Surprisingly, there were only 6 cases of trauma and they did well after surgical treatment, i.e. splenectomy for damaged spleen, repair of the bladder for the damaged bladder with indwelling Foley catheter thereafter, and interdental wiring for fractured mandibles.*

## BACKGROUND

Surgical emergencies represent crucial presentations of patients needing urgent medical care; and patients needing such emergency services usually present at all times of the day, because of the severe nature of their illnesses. Most often these patients go to state owned hospitals in Enugu Nigeria, which offer comparatively cheaper services. These are 3 in number and they serve a population of over 2.5 million. However some specialized private hospitals also offer such surgical services and are therefore also sort after by some of these patients. The number of surgical patients needing such emergency facilities from these private institutions increases, especially when hospital workers in these state owned facilities embark on occasional but troublesome strike actions from industrial disputes; because these trade union disputes often throw out already admitted sick patients into the streets and precludes admission of new ones. The only option as such dire times is to seek help from these specialized private owned hospitals, to avoid unnecessary suffering or death. Trans Ekulu hospital, Enugu is one such hospital specifically offering general surgical and urological emergency services to needy patients from the city of Enugu and the surrounding suburbs, and occasionally from neighbouring states.

It is important to document the pattern of these surgical emergencies which also contributes substantially to the total health care delivery in our society.

## MATERIALS AND METHODS

This study was carried out at Trans Ekulu Hospital Enugu, South Eastern Nigeria, a privately owned specialized medical facility. The theatre records and case notes of patients who underwent emergency surgical treatment from 1993-2008 were studied. They were analyzed with respect to sex and age of the patients, the nature of illness and treatment given. An assessment of the outcome of treatment they received was also made with respect to mortality.

## RESULTS

During this 15 year period, a total of 3712 patients were seen, and out of these 281 cases (7.6%) were emergencies; comprising 178 males and 101 females, with a male to female ration of (1.78:1). The ages of these patients ranged from 1year to 94years with a mean age of 34years). The 3 commonest emergency conditions encountered were appendicitis, intestinal obstruction and acute

retention of urine from prostatic obstruction, (Table 1). In the appendicitis group there were 79 females and 27 males (2.9:1). Appendicectomy was curative for these patients

**Table1:** Emergency conditions

| | |
|---|---|
| **1. Appendicitis** | **106** |
| **2. Intestinal obstruction** | 51 |
| **3. Acute retention of urine** | 48 |
| **4. Acute abdomen** | 20 |
| **5. Testicular torsion** | 18 |
| **6. Abscess** | 18 |
| **7. Strangulated haemorrhoids** | 7 |
| **8. Trauma** | 6 |
| **9. Gastrointestinal bleeding** | 4 |
| **10. Fissure in ano** | 2 |
| **11. Fournier's gangrene** | 1 |
| **12. Total** | 281 |

Apart from 2 patients with lower intestinal bleeding who were managed conservatively with bed rest, intravenous fluids and blood transfusion, all the other patients got appropriate and timely surgical intervention for their surgical lesions.

Breaking down the intestinal obstruction category further, there were 33 were males and 18 females. Twenty three cases were from adhesions involving small bowel, 15 were caused by external hernias and 13 occurred in the large bowel (Table 2). They had surgical exploration for relief of obstruction and 22 out of 51 patients [43.1%] required resection and anastomoses for gangrenous bowel.

**Table 2.** Intestinal obstruction

| | |
|---|---|
| **Adhesions** | **23** |
| **External hernias** | 15 |
| **Colonic cancers** | 10 |
| **Sigmoid volvulus** | 2 |
| **Caecal volvulus** | 1 |
| **Total** | 51 |

Acute abdomen was caused by several different lesions, but perforation of the ileum by typhoid enteritis was the commonest followed by duodenal perforation caused by peptic ulceration (table 3). These patients underwent laparotomy after adequate resuscitation by nasogastric decompression, administration of isotonic intravenous fluids and antibiotic therapy. Once the abdomen was opened, the lesions were dealt with accordingly.

**Table 3.** Causes of acute abdomen

| | |
|---|---|
| **Perforated ileum (typhoid)** | **7** |
| **Peforated duodenum (peptic ulcer)** | 6 |
| **Torsion of ovarian cyst** | 2 |
| **Complicated appendicitis** | 5 |
| **Total** | 20 |

Analysis of the abscesses encountered showed that the perianal type was the commonest followed by breast abscesses, (Table 4). These were drained under general anaesthesia.

**Table 4.** Distribution of abscesses

| | |
|---|---|
| **Perianal** | **11** |
| **Breast** | 2 |
| **Thigh** | 2 |
| **Gluteal region** | 2 |
| **Back** | 1 |
| **Total** | 18 |

Out of the 18 patients that had testicular torsion, 3 lost one testis each the rest had orchidopexy for all the remaining 33 testes.

Surprisingly, there were only 6 cases of trauma (Table 5) and they did well after surgical treatment, i.e. splenectomy for damaged spleen, repair of the bladder for the damaged bladder with indwelling Foley catheter thereafter, and interdental wiring for fractured mandibles.

**Table 5.** Trauma

| | |
|---|---|
| **Fracture mandible** | **3** |
| **Splenic injury** | 2 |
| **Bladder injury** | 1 |
| **Total** | 6 |

The patients with anal fissure and strangulated haemorrhoids both had anal dilation while the later had haemorrhoidectomy, all under spinal anaesthesia.The patient with Fournier's gangrene had debridement of the gangrenous tissues and delayed closure of the remaining scrotal skin after several dressings of the residual wound. The 4 patients who had significant gastrointestinal bleeding comprised 2 cases of diverticulosis, one case of haemorrhoids and lastly a case of benign gastric tumor.

There were 11deaths (3.9%) in tris study, 8 from patients who suffered from intestinal obstruction, and 3 from acute abdomen.

## DISCUSSION

It is important to know the pattern of disorders in hospitals offering different kinds of services, because they tend to differ from series to series for several reasons, especially technical/infrastructural factors as well as cost of treatment, to mention but a few. In this study, appendicitis which afflicted females more than males (2.9:1) was found to be the commonest emergency. This agrees with the findings of Marudanayagam *et al* [1] and Chianakwana *et al* [2] as well as those of an oxford series[3]. In some other series,[4,5] trauma, involving both soft tissue and bones was the commonest reason for seeking emergency treatment, while in this study blunt trauma involving both soft tissue and bones occupied the 9$^{th}$ position (table 5). Fortunately there was no mortality from these injuries, even though splenic damage which occured in 2 patients, has the potential for causing serious haemodynamic disturbances that can be fatal, if there is a delay in seeking surgical help.

Intestinal obstruction which accounted for 51 cases or 18% of all the cases, were mainly due to postoperative adhesions followed by external hernias. This agrees with the findings and some other investigators of [6-8] in which adhesions featured as the commonest cause of intestinal obstruction. On the contrary Madziga *et al* [9] working in northern Nigeria found external hernias still, the commonest cause of intestinal obstruction.

Acute retention of urine was the third commonest emergency disorder and this afflicted 48 males (17.2%) who had obstruction from prostatic enlargement. Acute urinary retention is a common urological problem and is recognized worldwide, as a significant public health issue [10] . It generally causes a great deal of discomfort to the patient and his immediate family members, because of the associated intolerable pain. Patients feel a great sense of relief when acute retention of urine is relieved by catheterization, either per urethram or by the suprapubic route. However this is not the solution to their problem, and when patients carry indwelling catheters for prolonged periods, before prostatectomy, they complain. These complaints which included burning spasms, persistent desire to micturate and sense of loss of diginity, were noted in other series[11]. Our patients who delayed before undergoing final treatment either because of poverty or vacillated before accepting final surgical operation, experienced these discomfort.

Acute abdomen which accounted for 7.88% of the emergencies (20 cases), was responsible for 3 deaths recorded in this study. Acute, severe abdominal pain almost always is a symptom of intra-abdominal disease and often a sole indicator for surgery. Generally this has to be attended to swiftly because some of the disorders causing it like perforations and gangrene are life threatening. Whereas modern antibiotics have improved survival, delay is still a strong determinant for lethality[12].

We had 13 cases of perforation (table 4). Early arrival to hospital, proper resuscitation with isotonic intravenous fluids and use of 3rd generation of cephalosporins with metronidazole and swift exploratory laparotomy accounted for the low mortality.

Testicular torsion which is a major cause of acute scrotal pathology was seen in 6.46% (18 cases) of the emergencies that presented. Only 3 out 18 [16%] had unilateral orchidectomy and these patients came 3 days after the onset of the scrotal pain. Orchidectomy for gangrenous testis which is a major catastrophe continues to occur [13]. Available information indicates that as much as 25% of testes that have suffered torsion and present after 24 hours may become gangrenous and need orchidectomy. Rampaul and Hosking, working in Dorset, documented 6 orchidectomies out of 22 scrotal explorations [27%] for testicular torsion [13].

Abscesses and strangulated haemorrhoids can generate significant discomfort and disability. Appropriate recognition and intervention can ameliorate symptoms expeditiously. Eighteen patients in these series who had abscess in various locations [Table 3] underwent expeditious incision and drainage under general anaesthesia in most cases. In addition, the 7 patients in this group who had strangulated haemorrhoids, had great relief and smooth recovery after anal dilatation and haemorroidectomy, under spinal anaesthesia were performed.

In conclusion, appendicitis featured prominently, and so did intestinal obstruction, as well as acute retention of urine. There was a high resection rate for intestinal gangrene in the intestinal obstruction group, indicating late presentation, after the onset of obstruction.

There was a high salvage rate of testes in those with testicular torsion, obviously due to early presentation. Generally this may well be due to the fact that young people are affected, and this segment of the population well aware that of the fact that testicular tissue is necessary for procreation. They therefore presented early, once severe scrotal pain started, and there was no delay in hospital, before operating on these subjects. No doubt, early presentation and recognition of these emergency surgical disorders will go a long way in minimizing the morbidity and mortality these associated with these disorders.

Finally, a major difference seen was in the low number of trauma patients seen as opposed to what obtains in many of the quoted series which were government hospitals.

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