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Short Communication

Laparotomy: Bowel Related Acute Abdomen in a District Hospital Damaturu Yobe State North Eastern Nigeria

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Abstract

In Africa and other developing countries, acute abdomen is still a major cause of morbidity and mortality. The study reviewed laparotomy cases following bowel related acute abdomen excluding external hernias from January 2010 to December 2016, managed at District Hospital Damaturu North Eastern Nigeria. A total of 176 patients were studied age ranged between 8 months to 60 years with a male to female ratio of 1: 1. The peak age group was 11 to 20 years accounting for 31.25%. Ruptured appendix was found in 40.91% and 2.84% colonic tumour. The procedures done were closure of bowel perforation in 63.16% for typhoid, and 36.84% for trauma. The post operative complications were surgical site infections in 9.66%, enterocutaneos fistula in 1.70%, and residual abscesses in 1.70%, acute renal failure in 0.6%. The mortality recorded was 1.7%, with acute renal failure, diabetic ketoacidosis, and septicemia accounting for 0.6% each. Procedures done were simple closure of bowel perforations were done in 74, and appendectomy in 72 tables 3. Detailed history and thorough physical examination is the main stay for diagnosis, with limited supportive investigations to plan for definitive treatment.

Keywords: Laparotomy, Acute bowel, Related Conditions, Pattern, Management Outcome.

INTRODUCTION

Acute abdomen is described as a sudden painful intra abdominal pathology that requires urgent surgical intervention (Grundmann et al., 2010). Abdominal pain is the commonest presentation in surgical department (John et al., 2014), it is therefore important to understand the various causes requiring surgical intervention. Preoperative diagnosis is essential to minimize morbidity and mortality (Majan and Armita, 2009) especially where the diagnostic facilities are limited. Preoperative assessment and diagnosis avoid negative laparotomy and improve outcome (Greeta and Shreya, 2017). Previous study has shown to reduce diagnostic errors by making preoperative diagnosis (Laura et al., 2015). Clinical diagnostic acumen has shown to be the main tool in disease diagnosis and therapy especially in developing countries where presentation is late, and complications enormous, with limited diagnostic facilities (McConkey, 2002). Where facilities are available plain abdominal radiographs (Rothrock et al., 1991), abdominopelvic ultrasound scan (Cartwright and Knudson 2015), and CT scan (Stoker et al., 2009) is useful diagnostic investigation to facilitate in confirming diagnosis. The study aimed at determining the outcome of early surgical intervention in bowel - related acute abdomen in a developing country.

Patients and Methods

The study reviewed all patients that had laparotomy for

bowel related acute abdomen, excluding external hernias, between January 2010 to December 2016. Permission for the study was granted by the Hospital management and informed consent obtained from all patients. Information extracted from clinical and laboratory records and data analyzed using SPSS statistical analysis. All patients were resuscitated using intravenous fluids, antibiotics (ceftriaxone/ metronidazole), tetanus toxoid, and blood where necessary. Investigations done were full blood count; blood chemistry, random blood sugar, and abdominal ultrasound scan where necessary. All procedures were done under general anesthesia.

RESULTS

A total of 176 patients were studied age ranged between 8 months to 60 years with a male to female ratio of 1: 1. The peak age group was 11 to 20 years accounting for 55(31.25%) table 1. Ruptured appendix was found in 72(40.91%) and 5(2.84%) colonic tumour table 2. The procedures done were closure of bowel perforation in 76(typhoid perforations 48 ie 63.16%, and trauma 26 ie 36.84%) table 3. The post operative complications were surgical site infections ion 17(9.66%), enterocutaneos fistula in 3(1.70%), and residual abscesses in 3(1.70%), acute renal failure in 1(0.6%). The mortality recorded was 3(1.7%), with acute renal failure, diabetic ketoacidosis, and septicemia accounting for 1(0.6%) each. Procedures done were simple closure of bowel perforations were done in 74, and appendectomy in 72 tables 3.

Table 1. Age distributions

Age(years)	No	%
<1	4	2.27
1 – 10	25	14.21
11 – 20	55	31.25
21 – 30	47	26.71
31 – 40	23	13.07
41 -50	14	7.96
51 – 60	8	4.55
Total	176	100.00

Table 2. Diagnosis

Diagnosis	No	%
Ruptured appendix	72	40.91
Typhoid perforation	58	32.96
Trauma	29	16.48
Sigmoid Volvulus	7	3.98
Colonic tumour	5	2.84
Intussusceptions	5	2.84
Total	176	100.00

NB: Trauma: - Stabwound-3, Arrowshot-4, Gunshot-9, Blast-13

Table 3. Procedures done

Procedures	No
1.Simple closure of bowel perforation	77
2.Bowel resection and anastomosis	26
3.Appendectomy	72
4.Mesenteric repair	11
5.Bladder repair	7
6.Splenectomy	3
7.Liver repair	2
8.Kidney repair	1

NB: Simple closure of bowel perforation: - Typhoid-48, Trauma-3, Gunshot-4, Stabwound-9, Blast-3.
Bowel resection and anostomosis: - Multiple typhoid perforations-10, Sigmoid Volvolus-7, Rectal trauma-3, Colonic tumours-6

Table 4. Complications

Complications	No	%
Surgical site infections	17	9.66
Residual abscess	3	1.71
Acute renal failure	1	0.57
Enterocutaneos fistula	3	1.71
Mortality	3	1.71

NB: Mortality Renal failure -1, Diabetic ketoacidosis -1, and Septicemia -1

DISCUSSION

Despite improvement in clinical evaluations as well as advancement in diagnostic methods, correct diagnosis of acute abdomen may sometimes be difficult. Patients with acute abdominal pain constitute the majority of surgical patients. When clinical diagnosis of acute abdomen is made time should not be waist on high tech investigations apart from the basic biochemical and optimizing patient for surgery (George et al., 2014). In this study bowel related acute abdomen was found to be common in 11 – 20 years (31.25% of patients), followed by ages 21 – 30years (26.71% of patients). This is in sharp contrast with studies by Chhetri RK et al who recorded 20 29 years (49%% of patients), the younger age recorded in our study was as a result of high incidence of typhoid perforation recorded consequence of poor socioeconomic state of the population. In this study ruptured appendix was the commonest and observed in 40.91% of cases this is similar to Kotiso et al where he recorded 58.8%. The postoperative complications were surgical site infections in 10.12% and enterocutaneos fistula in 1.7%. The mortality recorded was 1.7% (Zinabu et al., 2006) which is similar to study carried by Zinabu et al that recorded a mortality of 3%.

CONCLUSION

Early diagnosis through thorough history and physical

examination as well as adequate preoperative resuscitation and early surgical intervention will go a long way in reducing morbidity and mortality.

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