The Pattern Of Adult External Abdominal Hernias In Zaria

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ABSTRACT

Over a period of 12 years seven thousand, nine hundred and fifty-two (7952) patients with general surgical problems were operated on at the Ahmadu Bello University Teaching Hospital, Zaria. Of these, patients with external abdominal hernias constituted nine hundred and eighteen (918). Operation for hernias constituted about 12.5% of the operative workload of the general surgeons in this hospital. The descending order of occurrence of external abdominal hernias was inguinal, femoral and incisional. Right inguinal hernias were commoner than left inguinal hernias with a ratio of 1.7:1. The indirect inguinal hernias accounted for 67.5% of cases of inguinal hernias. There were fifty (50) of cases of bilateral inguinal hernias. Femoral hernias were commoner in the female patient than in the males, though inguinal hernias will still the commonest hernias in the females. Generally speaking, femoral hernias were commoner on the left side than on the right side. Incisional hernias occurred in women following caesarean section for obstructed labour. The commonest mode of presentation in all hernias was a reducible simple hernia. Other modes of presentation included irreducible hernia, intestinal obstruction, intestinal strangulation with peritonitis and occasional giant hernias (fascial deflect diameter greater than 10cm). Femoral hernias obstructed more commonly than inguinal hernias. Modified Bassini repair was the method employed to repair the inguinal hernias, low approach for simple femoral hernias and high approach for complicated femoral hernias. Simple repairs also were employed for incisional hernias with Keel method for moderate-to-giant hernias (facial deflect > 10cm in diameter). Four patients died, three from overwhelming infection following strangulation obstruction of inguino-scrotal hernias and one from severe chest infection following repair for a giant incisional hernia. The follow up was poor. Most patients defaulted after their second visit to surgical out patient department. External abdominal hernias remain a significant surgical problem in our environment. *(Nig J Surg Res 2000; 2: 12-15)*

KEY WORDS: External abdominal hernia, Adults, Morbidity, Mortality

Introduction

External abdominal hernias are a common problem in Africa. They constitute a significant proportion of the surgical workload of doctors practicing in Nigeria.[1-3] This report reviews the anatomical variants, modes of presentation and management of adult external abdominal hernias as seen at the Ahmadu Bello University Teaching Hospital, Zaria over a period of twelve years.

Materials and Method

The surgical records of all the patients who had any form of external abdominal hernia repaired at the Ahmadu Bello University Teaching Hospital, Zaria from January 1987 to December 1998 were reviewed. Nine hundred and eighteen of such records were available and form the basis of this report. During the same period, a total of 7952 patients had varying types of surgical procedures at the same hospital.

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Results

Operation for hernias constituted 12.5% of all operation (general surgical cases) at Ahmadu Bello University over the twelve-year period.

The hernias were common between the ages of 20 years and 50 years with a M:F ratio of 6.5:1 (Table 1) There were 994 hernias in the 918 patients (Table 1 and 2).

Table 1: Age And Type Of Hernia

Age (Years)	Unilateral Inguinal	Bilateral Inguinal	Femoral	Incisional	Others	Total (%)
15-19	44	-	5	5	7	61(6.2)
20-29	158	6	7	15	18	204(20.5)
30-39	140	8	25	5	18	196(19.7)
40-49	183	9	10	5	22	229(23.0)
50-59	105	14	7	-	10	136(13.7)
60-69	51	4	10	-	7	72(7.2)
70+	63	10	10	-	13	96(9.7)
Total	744	51	74	30	95	994(100)

Table 2: Sex And Type Of Hernia

Type of Hernia	Male	Female	Total
Unilateral Inguinal	661	32	693
Bilateral Inguinal	43	8	51
Femoral	11	63	74
Incisional	3	27	30
Epigastria	17	22	39
Others	23	8	31
Total	796	122	918

Table 3: Modes Of Presentation In 900 Hernias

Mode Of Presentation	Inguinal (%)	Femoral (%)	Incisional (%)
Simple	318(40)	30(40)	17(57)
Giant	40(5)	0(0)	7(23)
Irreducible	80(10)	4(5)	3(10)
Obstructed	159(20)	21(30)	2(7)
Strangulation+ Peritonitis	199(25)	19(25)	1(3)
Total	796(100)	74(100)	30(100)

Inguinal hernias were most common (80%) and were bilateral in 51(5.1%) cases. Eight (15.7%) of the 51 cases of bilateral inguinal hernias occurred in females and 43 (84.3%) were males. Direct hernia formed 32.6% of all the inguinal hernias.

Incisional hernias were the third commonest seen in 30 patients (3.0%) and in 66% of the cases, operation for caesarian section was the cause. Other predisposing factors found included inadequately treated chest infections, wrong surgical techniques and post-operative wound infection.

The other types of hernias were uncommon (Table 2) they accounted for 9.0% of the cases. The modes of presentation in majority cases were simple hernias (Table 3). There was a high rate of intestinal obstruction in femoral hernias. The postoperative complications were mainly chest infections and wound sepsis. As a result of poor follow up the recurrence rate could not be ascertained.

Discussion

Adult external abdominal hernia repair constitutes a significant proportion of general surgical workload in this center, accounting for 12.5% of the adult general surgical cases. This is less than what was reported in the South-West of Nigeria.[4] The average age of the patients was 32 years in that report, which is lower than what is obtainable in this report. An average age of 49 years was report for inguinal hernia repair from Ghana. [2]

There were 75 cases of multiple hernias. There was a case of a 65 years old woman who presented to the hospital because of obstruction of a right inguinal hernia; she also had a left inguinal hernia, left femoral and an epigastric hernia. Inguinal hernia was the predominant hernia in this hospital (88%) as reported earlier from this part of Nigeria.[1] In this report, it constitutes 80%. It was more common on the right side, which may be attributed to delay in the descent of the right testis. The ratio of right inguinal hernia to left inguinal hernia was 1.7:1. Multiple inguinal constituted 51(5.1%) and the bilaterality of inguinal hernia was 6.4%. There was a poor documentation as to whether the inguinal hernias were direct or indirect but of the available data for analysis, indirect inguinal hernia formed 62.4% of the cases. It is still common in our hospital to see giant hernia (bigger than patient's head or descending down to mid thigh) especially the inguinoscrotal type that has been previously interfered with by the inexperienced.

Femoral hernias are thoughts to be rare in the African. They accounted for 7.5% of all cases. The femoral to inguinal hernia ratio was 1.1:7. This suggest that femoral hernia is commoner in this part of the country than earlier reported (1.8%).[3] A figure of 1.5% has been reported from elsewhere in Africa.[3] Femoral hernia is still more common in females than males (M:F = 1.5:7). A study from southern Nigeria found a high incidence in the males (M.F = 3:2).[5,6]

Incisional hernial was the third commonest (3%) of the hernias. It occurred commonly in the females and mostly following caesarian section for obstructed labour. Most of the surgeons also used chromic catgut suture to close the anterior abdominal wall fascia. The high rate of wound infection in these patients and poor surgical technique seem to be the major contributing factors in the aetiology of incisional hernia in our environment The other hernias were not very common as compared to the three previously mentioned types.

The modes of presentation of most of the patients were as simple, bulging, tolerable mass, irreducible external hernia, intestinal obstruction and strangulation with peritonitis (Table 3). Most of them did not present to the hospital at the earliest notice of the swellings, but when convenient or complicated. The overall mortality was low at 1%; four patients died, all with complicated hernias (intestinal obstruction and intestinal strangulation). The follow up was poor. Most patients defaulted after the second visit to the surgical out patient department, averagely at 6 to 8 weeks after discharge from hospital.

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