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OUTPATIENT SIMULTANEOUS BILATERAL INGUINAL HERNIORRHAPHY IN A RURAL PRACTICE.

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ABSTRACT

A retrospective review of all inguinal herniorrhaphies performed on outpatient basis in a rural practice between 1983 and 1999 was undertaken to determine if simultaneous bilateral hernia repair carried a greater risk than unilateral herniorrhaphy.

In the 16-year period, 2880 unilateral and 393 bilateral hernias were repaired on outpatient basis. The difference in the incidences of complications in both groups was not statistically significant ($p< 0.2$). The safety of spinal anaesthesia in the outpatient management of inguinal hernia was also demonstrated.

KEY WORD: Hernia, bilateral repair, outpatient, rural

INTRODUCTION

Inguinal hernia is the most common surgical condition encountered at the secondary level of health care and bilateral inguinal hernia constitutes a significant proportion[1-3]. The safety of outpatient repair of external abdominal hernia in urban and rural communities of the developing world is well established[1,2]. Studies have also shown that simultaneous repair of bilateral inguinal hernia carries no greater risk when compared with unilateral herniorrhaphy[4,7].

In the rural communities where majority of the populace live, there are the added problems of poverty, ignorance, unreliable and costly transportation that negatively influence the delivery of health care. These factors necessitate the provision of care that is readily accessible, appropriate, acceptable and affordable to patients in the rural community with surgical diseases that have become a major health problem[8].

The aim of study is to present the outcome of the outpatient management of bilateral inguinal hernia in a rural setting.

MATERIALS AND METHODS

The case notes of all patients who had repair of external abdominal hernia at the District Hospital, Eruwa (1983 to 1986) and at Awojobi Clinic Eruwa (1986 to 1999) were retrieved. One of the authors (OAA) had been the surgeon-in-charge in the two hospitals in the periods under review. All the patients who had outpatient repair of unilateral and bilateral ingunial herniae were further analysed Data extracted included age, sex, occupation, type of anaesthesia used and the complications that developed.

In the early years when transportation was fairly easy, the patients went home a few hours after operation but in the last six years they rested overnight in the hospital without additional nursing care. And allow for adequate healing and to coincide with market days when transportation was better. Skin sutures (size 0 monofilament nylon) were removed on the tenth postoperative day. Repair in the adult was of the Bassini type as modified by Pearson[9] using No 1 monofilament nylon suture. Herniotomy was performed in the paediatric age group.

Ketamine anaesthesia was used exclusively in paediatric patients, intramuscular Ketamine 6-8mg/kg body weight for children under five years and by the intravenous route (2-4mg/kg body weight) in order children. Spinal anaesthesia in adult patients was effected with 2ml 5% plain xylocaine using a 23G needle for lumbar puncture; an intravenous infusion line being established in all patients to combat hypotension that may develop as a result of the block of sympathetic fibres. One per cent xylocaine with or without adrenaline was used for local anaesthesia.

Postoperative analgesia consisted of aspirin or paracetamol and diazepam at night. No prophylactic antibiotic was administered to the patients.

RESULTS

In the 16-year period, 4187 patients had repair of external hernias comprising 3863 inguinal (92.3%), 211 femoral (5.0%), 85 epigastric (2.0%), 13 lumbar (0.3%), 7 umbilical (0.2%), 4 Spigelian (0.1%) and 4 ventral (0.1%). There were 2880 unilateral inguinal hernias (155 recurrent) and 393 bilateral injuinal hernias (21 single recurrent and 11 bilateral recurrent) repaired on outpatient basis, the latter simultaneously. All recurrent hernias and 80% of bilateral hernias were repaired by one surgeon. On other occasions, the surgeon assisted a medical officer. In the same period only 190 patients (4.5%) presented with obstructed or strangulated groin hernias with 12(0.3%) mortalities.

Table 1 shows the age and sex distribution. The ages ranged from two months to 85 years in the unilateral group and four months to 80 years in the bilateral group. Eighty five per cent of the adult patients were peasant farmers, the others being artisans and civil servants.

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Table 1: **Outpatient herniorrhaphy; age/sex distribution**

Age (years)	Male		Female	
	Unilateral	Bilateral	Unilateral	Bilateral
0—9	323	15	11	1
10—19	140	9	7	1
20—29	290	23	12	1
30—39	339	35	65	10
40—49	371	65	124	14
50—59	395	63	94	17
60—69	387	85	97	15
70—79	161	22	34	10
80—89	26	7	4	-
Total	2432	324	448	69
Per cent	74.3	9.9	13.7	21

Table 2 shows the types of anaesthesia employed. Spinal anaesthesia was used in 559 patients (17.1%). Complications encountered in the series are shown in table 3. Using the concept of the "null hypothesis", the differences between the two groups are not statistically significant ($p<0.2$). The only case of acute urinary retention occurred in a 25year old man who had right inguinal herniorrhaphy under local anaesthesia. There was no mortality in this series of patients treated on outpatient basis.

Table 2: **Outpatient herniorrhaphy: types of anaesthesia**

Type	Unilateral	Bilateral
Local infiltration	2048	236
Spinal	426	133
Ketamine	406	24
Total	2880	393

Table 3: **Outpatient herniorrhaphy: Complications**

Complication	Unilateral (2880)	Bilateral (393)
Wound infection	144	22
Scrotal haematoma	58	6
Spinal headache	5	1
Acute urinary retention	1	—

The recurrence rate could not be ascertained, as most patients did not return for follow-up as soon as their wounds healed on account of the costly transportation and lack of interest or ignorance in follow-up.

DISCUSSION

Economic considerations and the magnitude of the problem have influenced the adoptions of day-care (out-patient) or short-stay procedures in the management of many surgical diseases. The introduction of laparoscopic techniques has widened the scope too.[10,11] These factors are most evident in the rural areas of developing countries where most of the people are poor and ignorant and where health institutions are few, poorly equipped and manned. The national economic decline of the last two decades has worsened the situation.

This study has shown that external abdominal hernia is still a major surgical problem of the rural populace. It has also proved conclusively the safety and reliability of outpatient simultaneous repair of bilateral inguinal hernia in a rural setting. Thus early surgery has prevented the high morbidity and mortality associated with obstruction and strangulation of inguinal hernias as shown by the low incidence of patients (4.5%) presenting with obstruction or strangulation. Previous similar studies have been conducted in tertiary institutions situated in cities on patients who were admitted after surgery[4-7].

The safety of spinal anaesthesia in the outpatient management of inguinal hernia has again been demonstrated. This had been established in an earlier study[1]. The low incidence of spinal headache is due to the use of a fine gauge needle for lumbar puncture and the rarity of acute urinary retention especially in the elderly patients due to early ambulation and the use of short-acting anaesthetic agent[12]. Spinal anaesthesia facilitates the teaching of junior medical officers in the performance of groin herniorrhaphy as patients are better relaxed and analgesia is complete and lasts longer.

The overall low level of septic complications is due to the increasing experience gained from the large number of cases managed by a small medical team over the years. The duration of operation is, therefore, considerably short and there is no opportunity for nosocomial infection with antibiotic-resistant bacteria.

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