



Management of Inguinal Hernias in the Surgical Department of the ANAIM De Kamsar Hospital

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Abstract

Introduction: The aim of our study was to evaluate the results of inguinal hernias treated at ANAIM Hospital in Kamsar.

Methodology: This was a seven-month prospective and analytical study of patients admitted and operated on for inguinal hernia, by prosthetic cure according to Lichtenstein or Stoppa and by Raphie. Our variables were epidemiological, clinical, therapeutic and evolutionary. We assessed the overall cost.

Results: The mean age of patients was 42.04 ± 16 (extremes 19 and 88 years), the sex ratio equal to 3.66; power workers were the most represented 70.19% (n=73). Seventy-two-point eleven percent (n=75) of patients were classified as Nyus II; 19.23% (n=20) as Nyus III and 8.65% as Nyus IV. The Lichtenstein technique was used in 92.30% of cases (n=96), the simple Raphie 4.80% of cases (n=5) and the Stoppa technique 2.88% of cases (n=3). Mean operative time was 40.6 min (extremes 20 and 120 min). Average hospital stay was 24 h (extremes 1 and 7 days). Testicular pain and recurrence were the postoperative complications observed in 2.8% (n=2) and 1.04% of cases (n=1).

Conclusion: Prosthetic management of inguinal hernias provides better postoperative results.

Keywords: Inguinal hernia; Management; Kamsar

Introduction

Inguinal herniorrhaphy is one of the most common elective procedures worldwide. In the United States, an estimated 800,000 inguinal hernia repairs are performed each year, representing 10% to 15% of all surgical procedures [1].

Today, several surgical techniques are available for the treatment of inguinal hernia [2,3]. However, two techniques are generally accepted as the best treatment options for inguinal hernia repair: The tension-free open Lichtenstein and laparoscopic procedures [4].

The aim of our study was to evaluate the results of inguinal hernias treated by the Lichtenstein technique in the surgical department of ANAIM Hospital in Kamsar.

Methodology

This was a seven-month prospective and analytical study conducted in the surgical department of ANAIM Hospital, Kamsar. The study included patients admitted for inguinal hernia. We included in the study patients admitted for inguinal hernia, hospitalized and operated by prosthetic cure according to Lichtenstein, Stoppa and Raphie. Non-resorbable polypropylene mesh (30 cm × 30 cm) was used for the prosthetic cure. We excluded from the study patients admitted and operated on for strangulated inguinal hernia. Our study variables were epidemiological, clinical, therapeutic and evolutionary.

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We assessed the average duration of the operation, the costs of prosthetic material and surgery, and patient satisfaction. Analysis was performed using EPI INFO software. The average follow-up time of postoperative patients was at least 6 months (Figure 1, 2).

Results

The mean age of our patients was 42.04 ± 16 with extremes of 19 and 88 years; the 29 to 38 age group was the most represented. We noted a male predominance in 97.12% of cases ($n=101$) with a sex ratio equal to 33.66; hard laborers (farmers and laborers) were the most represented in 70.19% ($n=73$). Seventy-two-point eleven percent (72.11%; $n=75$) of patients were classified as Nyus II; 19.23% ($n=20$) as Nyus III and 8.65% as Nyus IV. The hernia was right inguinal in 26.92% ($n=28$); left inguinal in 44.23% ($n=46$) and bilateral in 28.85% ($n=30$). The Lichtenstein technique was used in 92.31% of cases ($n=96$), the simple raphe in 4.81% ($n=5$) and the Stoppa technique in 2.88% ($n=3$). Mean operative time was 40.6 min, with extremes of 20-min and 120-min. Mean hospital stay was 24 h, with extremes of 1 and 7 days. Testicular pain and recurrence were the postoperative complications observed in 2.8% ($n=2$) and 1.04% ($n=1$) of cases. These complications were immediate in 66.67% ($n=2$) and late in 33.33% after a 6-month follow-up. In 33% of cases ($n=1$). The average cost of the prosthetic material was 793,000 Guinean francs (93 USD), with extremes of 300,000 and 800,000 FG (35-93USD). The average cost of the operation was 4000000 FG (465USD) with extremes of 2500000 and 5000000 Guinean francs (291-582USD).

Discussion

The hospital frequency of herniorrhaphy depends on geographical area. Worldwide, over 20 million abdominal wall hernias are repaired each year. Groin hernia is the most common type, accounting for around 70% of these hernias [5]. In sub-Saharan Africa, the rate varies from author to author; 40 woolly hernias treated by the Lichtenstein

technique were reported by Ouattara et al. [6] in 2004 at the Point G Hospital in Bamako. The young age of the patients in our study has been reported in most series [7]. Repeated physical effort at this age and the use of the abdominal strap would be determining factors in the genesis and aggravation of the parietal defect. The strength workers found in our series have been reported by several authors [8-11]. Type II, III and IV hernias of the Nyhus classification found in our series are mostly reported in the literature [7]. The mechanical and histometabolic factors responsible for dehiscence and enlargement of the inguinal orifice are the most decisive [12]. Until the 1990s, tissue repair was the main form of herniorrhaphy, but poor long-term efficacy (>10% recurrence in 10 years) and immediate postoperative pain were the main drawbacks. The invention of the polypropylene mesh improved the recurrence rate, but increased chronic post-herniorrhaphy pain (>3 months) [13]. The average operative time found in our series of patients operated on using the Lichtenstein and Stoppa technique is close to that reported by Boris et al. [14]. And significantly shorter than in patients with tissue repair, the cost of surgery and prosthetic material is difficult to assess and depends on the type of repair and monetary value. It was \$3,207.15 in the series by Fernando et al. [1]. Higher than in our series, postoperative complications observed after mesh repair are minor compared with those after open cure by Raphia, most often involving postoperative pain, hydrocele and rarely hematoma. Postoperative pain is more often of neuropathic origin [7,15]. Complications observed in our series were also minor, such as testicular pain in the Lichtenstein mesh repair and recurrence in one patient in the Bassini technique. Bassini tissue repair has long been considered a standard approach to inguinal hernia repair [16]. Its main limitation was that it put the surrounding tissue under tension, resulting in a higher recurrence rate of around 8.6% [17]. Tension-free cure is associated with less immediate postoperative pain, less need for analgesia, and faster convalescence [18]. Chronic pain, however, has become a classic

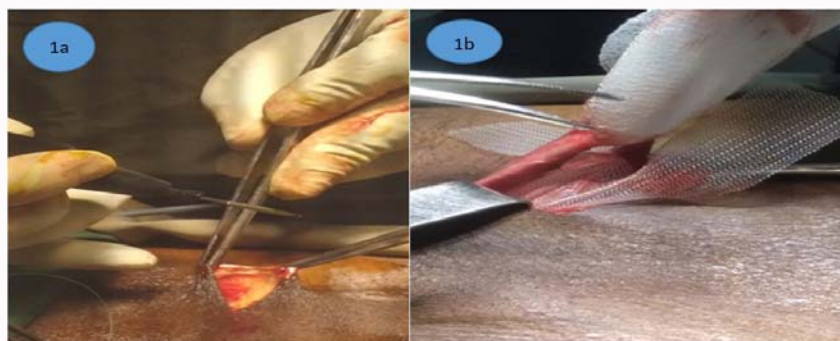


Figure 1: A) Incision of the skin and subcutaneous cellular tissue; B) Layout of the prosthesis. Photo library: ANAIM Hospital Surgery Department, Kamsar.

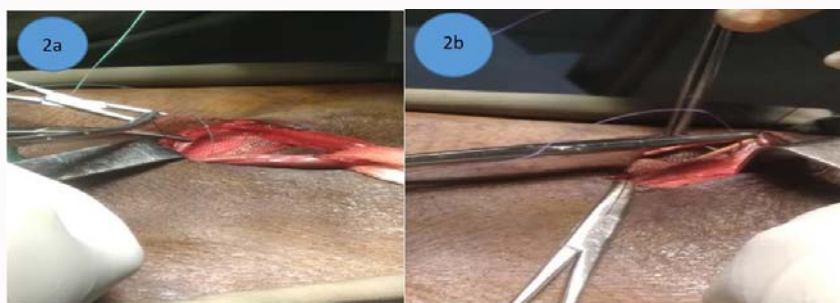


Figure 2: A) Plate fixation, B) Fascial closure and other views. Photo library: ANAIM Kamsar Hospital Surgery Department.

concern and a criterion of judgment. Its incidence varies from 0.7% to 43.3% depending on the publication [19], comparable to our series.

Conclusion

Inguinal hernias are frequent conditions in our practice. The prosthetic cure gives better postoperative results and is beneficial in terms of the length of the operation and the patient's hospital stay. Popularizing this technique and reducing the cost of prosthetic material would improve the management of these conditions.

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