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Surgical treatment of inguinal hernias: Experience of the Department of Visceral Surgery wing 3 at the Ibn Rochd University Hospital of Casablanca and the Faculty of Medicine and Pharmacy of Casablanca, Morocco About 123 cases over 3 years

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ABSTRACT

Inguinal hernia is a pathology whose incidence is increasing due to the aging of the population. Technical advances in surgery and anesthetics have significantly reduced the contraindications. Multiple surgical techniques have emerged, hence the complexity of a choice in which several criteria intervene. Our retrospective study examined 123 cases of groin hernias operated between December 2014 and January 2016, in the Department of Visceral Surgery, wing 3, at the Ibn Rochd Hospital in Casablanca. The objective of this study is to show the attitude of the department concerning the management of inguinal hernias in recent years as it appeared to us in the literature.

Keywords : Inguinal hernia - Liechtenstein - Prosthetic equipment - Laparoscopy.

INTRODUCTION

Inguinal hernia is defined as the spontaneous discharge from the inguinal orifice of the viscera outside the limits of the abdomino-pelvic region. It can be acquired (hernia of weakness) or congenital (persistence of a peritoneo-vaginal canal). The cure for inguinal hernia is the most common surgical procedure. It is a real public health problem, due to the direct costs of surgery and the indirect costs associated with work stoppages. Given the importance of the problem, surgeons are looking for methods that can serve three purposes: to limit anesthetic and surgical aggression, to resume normal activities by decreasing postoperative pain and to reduce the risk of recurrence to less than 5 %.

MATERIALS AND METHOD

This is a retrospective study of 123 cases of inguinal hernia, treated during a period of 3 years from January 2014 to December 2016, in the visceral surgery department, wing 3, at the Ibn Rochd Hospital in Casablanca. It is 122 men and one woman, with an average age of 54.5 years, with extreme ages of 19 and 90 years. 87.8% of hernias are primary while 12.2% are recurrent. 54.74% of the hernias are oblique external, 32.52% are direct hernias, 12.2% are mixed hernias and 0.81%

are crural hernias. 85.37% of the patients have factors favoring the appearance of the hernia, namely: chronic smoking (38.21%), voiding disorders (5.7%), constipation (6.5%), (6.5%) and chronic cough (0.81%). The most common use was locoregional anesthesia (79.67%). The most used prosthetic material was Polypropylene (81.3%). (0.81%), a case of urine retention (0.81%) and two cases of superficial infections (1.63%) were observed. No deaths were recorded. The average hospital stay is 24 hours. No case of recurrence was observed in our series, in patients who were followed with a follow-up between 1 year and 3 years.

RESULT AND DISCUSSION

In gastrointestinal surgery, the inguinal hernia represents the second pathology, after appendicitis and before the vesicular lithiasis, and the first pathology for man, since it reaches 36 men out of 1000 [3]. Inguinal hernia treatment accounts for 17% of digestive surgery in France and 24% in the United States. In our study, it represents 9% of the digestive pathologies in our department during the period of study. The average age of our series is 54.5 years, with extremes of 19 years and 90 years, which is consistent with those of the literature. Male predominance has been reported by all authors. This predominance is explained by the passage of the spermatic cord through the musculo-pectinal orifice which leads to a weakening of the transversalis fascia and hence the frequency of hernias. Some herniogenic factors are accepted by most authors. These factors should not be considered as determinants in the development of hernias, as hernia is primarily a consequence of parietal weakness. The right inguinal hernia is more frequent than the left. As for the type, the oblique external (indirect) hernia is more related to the abnormal persistence of a peritoneo-vaginal canal than to a congenital or acquired weakness of the inguinal wall. It accounts for 51% of inguinal hernias. This predominance of external oblique hernias is reported by the majority of authors. Direct hernia is an acquired hernia, known as a weakness of the posterior plane. It is more common in elderly, male subjects with a weakened inguinal wall. It accounts for 30% of inguinal hernias. The oblique internal hernia is exceptional. Its diagnosis is made in per-operative. The wide variety of anatomo-clinical forms of hernias has been the subject of several classifications. These are intended to facilitate the choice between different surgical methods. Indeed, several classifications were proposed but they were qualified as insufficient. Among the recent classifications, that of Nyhus is the most used, because it is balanced and quite complete. Comparative studies have shown that local anesthesia provides comfort for patients, especially in the first few hours after surgery, since after local anesthesia they have less nausea and vomiting, less headache and sore throat And it disrupted respiratory function less than other types of anesthesia. It also reduces the rate of general complications, length of hospitalization, postoperative pain and allows immediate resumption of feeding and walking. However, some authors criticize this technique: being difficult to control, having a poor muscle relaxation, increased difficulty in the obese and interruption of the surgical procedure to complete the anesthetic infiltration. The administration of an antibioprophylaxis makes it possible to reduce the risk of abscess of the wall and of general infection. It is administered at the time of induction using an anti-staphylococcal molecule. The frequency of complications is not well known. Accidents occur under the influence of several factors: the surgeon's experience, the anatomo-clinical type of the operated hernia (voluminous and muscular hernias), and the inguinal route leads to the risk of lesions of the anatomical structures surface). These complications are vascular (obturator artery lesions, epigastric artery, external iliac vessels), nervous (Lesion of the genito-crural nerve and abdomino-genital), section of the spermatic cord, lesion of the vas deferens and bladder lesion. According to Scales, prosthetic material must be chemically inert, physically unaffected by host tissue, does not cause an inflammatory reaction to giant cells, is not carcinogenic, does not cause d Allergic or hypersensitivity, can be easily sterilized. Polypropylene and Mersilene Tulle suitably meet the quality criteria defined by Scales [1,4]. The choice of a surgical procedure is difficult because of the large number of available techniques and the absence

of any indisputable superiority of either. The surgeon must choose between anterior, posterior or laparoscopic approach, between herniorraphy and prosthetic plasty [5,6]. The choice must be based on three main criteria of interest to the patient (solidity of the tissues), hernia (multidisciplinary hernia) and surgeon (training, experience and degree of specialization). The cure of the hernia can be done under general, locoregional or local anesthesia. Comparative studies have shown that local anesthesia gives less nausea, less vomiting and less headache than general anesthesia [7]. Locoregional anesthesia gives more urinary retention [8]. This drawback can be attenuated by the hydric restriction. Three comparative studies showed that local anesthesia was the least disturbing method of respiratory function. In addition, it contributes to reducing the rate of general complications [10], length of hospitalization [8,9,10] and postoperative pain [9,11,12]. As for the choice between herniorraphy and prosthesis, two theoretical arguments favor the use of prostheses in hernias with weakness of the posterior wall: the lack of resistance of the tissues and the precariousness of the sutures under tension. In practice, the results support prosthetic procedures which give a low recurrence rate: 1.5% for the Stoppa technique (64%), less than 1% for the Lichtenstein technique [13,14,15]. A randomized study including 717 hernia treatments showed that there were fewer recurrences with the Lichtenstein technique than with Shouldice [9]. In addition, the lack of tension provided by the prosthesis contributes to reducing postoperative pain [16,2,17]. Prosthetic prevention concerns septic risk and long-term tolerance. In reality, tolerance is good. The risk of sepsis is low: out of 10 studies totaling 22916 cases, the sepsis rate varied from 0 to 0.94% in eight series and only exceeded 1% in two series. The choice is essentially based on the age of the patient and the type of hernia. Direct or mixed hernias (Nyhus type III) have a higher risk of recurrence because of the weakness of the tissues [19,20] which justifies the installation of a prosthesis. The simplest route, feasible under local anesthesia, is the most prevalent. The posterior approach is preferred in the case of recurrence after anterior or in the case of a large bilateral hernia. Currently, it is competing with laparoscopic surgery which allows the same prosthetic repair by a less invasive approach [5]. Laparoscopic surgery of the hernia is more difficult than traditional surgery and its control is longer to acquire [22,23]. As a result, it presents a higher risk of complications [24]. In a survey of 13 French surgical teams trained in laparoscopic surgery involving 16,177 cases, 5 deaths (0.03%), 3 large vessel wounds (0.02%), 7 intestinal wounds (0 (25%), 25 urogenital tract wounds (0.02%), 15 intestinal occlusions (0.22%) and 35 immediate recurrences (0.28%). In some series, the rate of recidivism is abnormally high [25]. Overall, the benefit of laparoscopy for hernia is probably modest. However, performed by experienced surgeons, this method may have an advantage for voluminous, recurrent or bilateral hernias [21,26,27,28,29].

CONCLUSION

Hernial repairs are among the most common surgical procedures. Multiple surgical techniques have emerged. One of the major evolutions of hernia surgery was the appearance of synthetic materials. Laparoscopy has recently given rise to great hopes, but no laparoscopic technique seems to be much better than traditional surgery.

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