



Diagnostic and Therapeutic Aspects of Lumbar Hernias at the University Hospital Center of Libreville (Gabon): A Series of 5 Cases

Article History	<p>Abstract: <i>Introduction:</i> Lumbar hernias are rare, developed at the expense of 2 orifices in the posterolateral wall of the abdomen. The authors propose to describe the diagnostic and therapeutic aspects of lumbar hernias encountered in the Department of Visceral Surgery of the University Hospital of Libreville. <i>Patients and Method:</i> Retrospective study over a period of 4 years. Patients with lumbar hernia were included. The variables studied were age, sex, reason for consultation, route of initiation, surgery, occurrence of recurrence. <i>Results:</i> Five patients were collected with a male predominance and a mean age of 70.4 years. No patient had a history of a lumbotomy or recent lumbar trauma. Three patients presented with a simple lumbar hernia and received a prosthesis after repression of the sac. The 2 patients with strangulated hernias underwent sac resection and raffia. The open route was used in all patients. No recurrence was recorded after a follow-up of at least 1 year. <i>Conclusion:</i> Lumbar hernias are rare. Their diagnosis is clinical. Their treatment is surgical. The use of prostheses gives good results.</p> <p>Keywords: Lumbar hernia - Hernioraphy - Hernioplasty - Prosthesis.</p>
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Author Details	<p>INTRODUCTION</p> <p>Lumbar hernias are rare entities compared to other abdominal wall hernias (Pélissier, 2010). They emerge from two orifices: the Grynfelt quadrilateral and the Jean-Louis Petit triangle. The Grynfelt quadrilateral is deep and superior and the Jean-Louis Petit triangle is superficial and inferior. Lumbar hernias more often exteriorize through Grynfelt's superior lumbar quadrilateral because it is the deepest and must necessarily be crossed first for the hernia to pass through Petit's inferior triangle (Pélissier, 2010). The diagnosis is based on physical examination, but in some cases morphological examinations such as ultrasound can help in the diagnosis. The treatment of lumbar hernias is surgical, revolutionized by the advent of prostheses. In the local literature, few studies have been done on this relatively rare condition.</p> <p>Therefore, the authors propose to study lumbar hernias, encountered in the Department of Visceral Surgery of the University Hospital of Libreville, describing their diagnostic and therapeutic aspects.</p>
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Authors Affiliations	<p>PATIENTS AND METHOD</p> <p>This was a descriptive retrospective study conducted at the Department of Visceral Surgery of the University Hospital of Libreville from January 1, 2016 to December 31, 2010, i.e. a period of 4 years. All patients with lumbar hernia were included. The variables studied were age, sex, reason for consultation, route of initiation, surgery, occurrence of recurrence.</p>
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Corresponding Author* Dyatta Mayombo Kévin	<p>CONCLUSION</p> <p>Lumbar hernias are rare. Their diagnosis is clinical. Their treatment is surgical. The use of prostheses gives good results.</p>
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RESULTS

Table I: Summary of the characteristics of patients with lumbar hernia operated on at the Department of Visceral Surgery of the University Hospital of Libreville

	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5
Sex	M	F	F	M	M
Age (years)	68	73	60	70	81
Profession	Mason	Without	Secrétaire	Military (retired)	Without
BMI (Kg/m ²)	22,1 Normal	31,9 Obesity mild	23,7 Normal	20,4 Normal	18,3 Skinny
Preoperative diagnosis	Dorsal lipoma	Hernia lumbar	Dorsal lipoma	Hernia lumbar	Hernia lumbar
Type of hernia	Simple	Simple	Simple	Strangled	Strangled
Content of the bag	Epiploon retro peritoneal grease	Epiploon	Epiploon retroperitoneal grease	Epiploon	Colon
Treatment of the bag	Repression	Repression	Repression	Resection of the bag	Resection of the bag
Parietal repair	Parietal prosthesis	Parietal prosthesis	Parietal prosthesis	Parietal raphia	Parietal raphia

BMI: Body Muscular Index

Five cases of lumbar hernias were collected during the study period. These were 3 men and 2 women (Table I). The mean age was 70.4 years with extremes of 68 and 81 years (Table I). No patient had a history of lumbar surgery or recent lumbar trauma. Two patients had a history of inguinal hernioraphia indicated by uncomplicated inguinal hernia. The reasons for consultation were varied: 1 patient had consulted for lumbar discomfort, 2 for intermittent lumbar swelling and 2 for painful lumbar swelling. The diagnosis of uncomplicated lumbar hernia was made in 3 patients while the other 2 patients presented with a strangulated lumbar hernia (Table I). A patient with a strangulated hernia presented with an occlusive syndrome. All patients had undergone an open lumbotomy approach. The contents of the hernial sac were varied, they were retroperitoneal fat in 2 patients, omentum in 2 patients and colon in 1 patient (Table I). Patients with strangulated lumbar hernia had received 2-section overlock raphia; a Polypropylene® plate in the retro-muscular pre-peritoneal position was placed in the 3 other patients (Table I). The postoperative course was straightforward in all patients and there was no recurrence after a follow-up of at least one year.

DISCUSSION

Lumbar hernia is a rare condition. Since its discovery by Garangeot in 1731, 250 to 300 cases have been published (Pélissier, 2010). Zhou (Zhou *et al.*, 2004) found 11 cases between 1998 and 2000, Lebeau (Lebeau *et al.*, 2011) collected 14 cases from 1996 to 2006 and Mgbakor (Mgbakor *et al.*, 1999) objectified 7 cases from 1991 to 1993. We collected 5 cases over 4 years.

Male predominance has been described in the literature (Zhou *et al.*, 2004), (Lebeau *et al.*, 2011), (Mgbakor *et al.*, 1999). It occurs most in patients over 50 years old, Lebeau (Lebeau *et al.*, 2011) and Mgbakor (Mgbakor *et al.*, 1999) found mean ages of 54.7 years and 67 years, respectively. In short, in most cases, these are men over 60, thin and doing hard work (Pélissier, 2010) as in our series.

The etiologies of hernias are well known. Acquired hernias are more common (80%) and can be classified as primary and secondary hernias. All of our patients presented with primary hernias. Primary hernias are weak, non-traumatic hernias sometimes associated with an increase in intra-abdominal pressure (chronic cough, obesity, strength training) (Attolou *et al.*, 2018).

The diagnosis of lumbar hernia is a real challenge. The rarity of this pathology is at the origin of its ignorance by surgeons and radiologists who often confuse it with a lipoma. Lebeau (Lebeau *et al.*, 2011) reported that in their series of 14 cases, 3 cases had a preoperative diagnosis of lipoma. In addition to a lipoma, it is then advisable to eliminate a renal or extra-renal mass. However, the diagnosis can be clinical based on the characteristics of the swelling. But in case of strong doubt, we can help ourselves with a parietal ultrasound or more rarely an abdominal tomodensitometry which shows the passage of the hernia through the lumbar wall and makes it possible to specify its content (Pélissier, 2010), Baraket (Baraket *et al.*, 2011) had this approach in 2 patients out of 3 cases.

Strangulation is the main complication of hernias. Mgbakor (Mgbakor *et al.*, 1999) described of their 7 patients, 6 were seen in the strangulation stage due to failure to consult early.

The treatment of lumbar hernia is surgical. The open route is the most used in Africa (Lebeau *et al.*, 2011), (Mgbakor *et al.*, 1999), (Toukara *et al.*, 2020). Lumbar hernia surgery can be done laparoscopically with all the benefits it offers. Since the first case published in 1996 at least 36 cases of laparoscopic treatment have been published (Pélissier, 2010). Biance (Biance *et al.*, 2006) in France took this approach, using laparoscopy.

The surgical procedure is carried out in 2 stages: the treatment of the hernial sac and the strengthening of the abdominal muscular wall. The bag can be treated by reposition or by resection; this must be done carefully to avoid damaging the elements of the bag. We repressed the sac in patients with uncomplicated lumbar hernia. Attolou (Attolou *et al.*, 2018) and Toukoura (Toukara *et al.*, 2020) adopted the same attitude towards the hernial sac. Opening the sac in strangulated hernias helps control the type and condition of the contents. This process was also carried out by the teams of Lebeau (Lebeau *et al.*, 2011) and Baraket (Baraket *et al.*, 2011).

The repair of the defect should ideally be done by placing a prosthesis in the extraperitoneal position. Baraket (Baraket *et al.*, 2011) opted for this technique in his series. The lack of prosthetic material, linked to its cost and its availability in our regions, especially in emergency situations, sometimes forces us to use raffia as recommended by Lebeau (Lebeau *et al.*, 2011), Attolou (Attolou *et al.*, 2018) and Toukoura (Toukara *et al.*, 2020), with a high risk of recurrence. The use of prostheses is currently recommended as the optimal treatment for unilateral lumbar hernias, in addition to preventing recurrence (Meinke, 2003). The laparoscopic approach for the placement of a parietal prosthesis is recommended by some teams in order to limit the morbid effects of open surgery (Meinke, 2003), but this technique has not been used in our context with regard to the lack of technical platform. The placement of a lumbar parietal prosthesis was performed by open approach in our series.

CONCLUSION

Lumbar hernias are rare conditions. The diagnosis is clinical sometimes assisted by complementary morphological examinations. The treatment is surgical and should favor the use of prostheses which give good results.

CONFLICT OF INTEREST / ETHICAL CONSIDERATION

The authors declare no conflict of interest when performing this work and have all validated the final version.

The consent of the patients and the authorization to carry out this work by the hospital authorities have been obtained beforehand.

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