

The Management of Abdominal Incisional Hernia in Kara Teaching Hospital (Togo)

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ABSTRACT

Objectives: To determine the hospital frequency, identify the contributing factors and to analyze the management of abdominal incisional hernia at Kara teaching hospital (Togo).

Patients and Methods: This retro and prospective study spanned a period of 6 years from January 1, 2014 to December 31, 2019.

It took place in the general and digestive surgery department of Kara teaching hospital (Togo).

Results: During our study period, we had treated 20 incisional hernia among the 4573 laparotomies performed. Among the patients, 10 were women and 10 were men. The mean age is 41 with the extremes ranging from 3 years to 65 years. The patients belonged to several socio-professional groups dominated by housewives and those in the liberal profession. The surgical history was dominated by laparotomies for peritonitis followed by hernias of the white line. The incisional hernia was in on the white line in 17 cases, on a Mouchel incision in 1 case, on a Mac Burney scar in one case and on a drain hole in the right flank in one case. Contributing factors were parietal infections in all cases of peritonitis and obesity in the three cases of white line hernia and in the case of exploratory laparotomy. Therapeutically, the incisional hernia was treated by sample raphy in 4 cases and by prosthesis in 16 cases. The implantation site of the prosthesis was pre-fascial retro muscular in 16 cases. The outcome was marked by an infection of the wall in one patient and a seroma in 1 prolonged case for about 15 days in 3 patients.

Conclusion: Abdominal incisional hernias are frequent but rare in our practice. They are a complication of abdominal surgery and recognize several contributing factors whom the most frequent are emergency surgery and obesity in our study. The lack of financial means in our poor countries hinders the generalization of the use of prostheses in the management of abdominal incisional hernia.

Keywords

Abdominal Incisional hernia, Prosthesis, Laparotomy, Laparoscopy.

Introduction

Abdominal incisional hernia is a subcutaneous visceral protrusion in a weakened but not systematized area of the anterior or lateral

wall of the abdomen, mainly of postoperative origin [1]. It is an early or late postoperative complication of abdominal surgery. The main factors favoring their onset are wall infections, rapid resumption of activities, undernutrition, obesity, immunosuppression, the presence of cancer and treatment with chemotherapy [2]. Their frequency varies between 13 and 20% of laparotomies [3,4]. The management of this disease which was formerly based

on parietorrhaphy with an evolution marked with recurrences, currently benefits from parietoplasty with prosthesis, which can be done by laparoscopic route is the best treatment.

No study on an abdominal incisional hernia had ever been carried out at Kara teaching hospital. Therefore, you wanted to carry out this study with the objectives of determining the hospital frequency, identifying the contributing factors and analyzing the treatment at Kara teaching hospital.

Patients and Methods

This retro and prospective study spanned a period of 6 years from January 1, 2014 to December 31, 2019.

It took place in the general and digestive surgery department of Kara teaching hospital (Togo).

All patients hospitalized and had undergone surgery for postoperative abdominal incisional hernia in the general surgery department were included in our study.

Patients with spontaneous incisional hernia, traumatic incisional hernia and those with incomplete records were excluded from our study.

The parameters studied were epidemiological data (frequency, age, sex, profession), clinical (history, contributing factors, size and topography of the incisional hernia), therapeutic, follow-up, morbidity and mortality.

Regarding the management, the antibiotic prophylaxis was systematic based on Ceftriaxone®. All the patients benefited from a toilet the day before and the day of the intervention. All the interventions were carried out by laparotomy under general or loco regional anesthesia. No patient was operated on urgently. For the patients who had benefited from a raffia cure, the suture was done using sample or X stitches. On the other hand, for patients who had benefited from a prosthesis; it had been placed pre-fascial retro muscularly with the installation of a drain opposite. Abdominal restraint of the anterior abdominal wall had been systematically placed for 4 to 6 weeks. All the prostheses were microporous in polypropylene. Patients were discharged after removal of the drain. The patient was reviewed for control in 1 month, 3 months, 6 months and after a year.

Results

During our study period, we had managed 20 incisional hernias among the 4573 laparotomies performed.

Among the patients, 10 were women and 10 were men. The average age is 41 with extremes ranging from 3 to 65.

The patients belonged to several socio-professional layers dominated by housewives and those of the liberal profession (Table 1).

Table 1: Distribution of patients according to profession.

Number	
Housewives	9
Libéral	4
Students	3
Teacher	1
Military	1
Reteree	1
Farmer	1
Total	20

The surgical history was dominated by laparotomies for peritonitis followed by hernias of the white line (Table 2).

Table 2: Distribution of patients according to surgical history.

Number	
Laparotomy	13
Péritonitis	12
<i>Exploratory laparotomy</i>	1
Hernia of white line	4
Cesarean	3
Total	20

The abdominal incisional hernia was on white line in 17 cases, on a Mouchel incision in 1 case, on a Mac Burney scar in one case and on a drain hole in the right flank in one case.

The abdominal incisional hernia was small (<5cm) in 2 cases, medium (between 5 and 10 cm) in 4 cases and large (> 10 cm) in 14 cases.

Contributing factors were parietal infections in all cases of peritonitis and obesity in the three cases of white line hernia and in the case of exploratory laparotomy.

Therapeutically, the abdominal incisional hernia was treated by simple raphy in 4 cases and by prosthesis in 16 cases. The implantation site was prefascial retro muscular in all 16 cases. A suction drain was put in place in all cases of prosthesis placement with an average ablation on the 5th postoperative day with the extremes ranging from 3 days to 10 days.

The course was marked by infection of the abdominal wall in one patient and seroma in 1 prolonged case for about 15 days in 3 patients. The wall infection had regressed under local care.

Among the patients having benefited from a raffia cure only one was followed for 3 years without recurrence; the others were lost to follow-up. All the patients who received a prosthesis did not have a recurrence during one year of follow-up. We had no recorded deaths.

Discussion

The incidence of abdominal incisional hernia is generally low in African series unlike Western and Asian series. As proof, the rate which is respectively 0.43%, 0.74% and 3.7% in our series, that of Kanté et al in Mali and of James Didier et al in Niger [5,6].

This is due to the short-term study in the African series. Long-term studies have shown that the incidence varies between hospital centers between 11% and 23%; approximately 50% of abdominal incisional hernia develop within two years of surgery, 74% occur in all three years, and the risk increases by 2% each year [7-9].

The average age was 41 years in our study as in the African series, reflecting the youth of the African population [5,6,11].

We enrolled as many men as women in our study, whereas the predominance of the female sex was the rule in the literature. Several risk factors are linked to the female sex, including caesarean sections, overweight and multiparty [5,6].

The surgical history was dominated in our series by peritonitis and white line hernias followed by caesarean sections. On the other hand, Kanté et al in Mali had found cesarean sections followed by peritonitis, while Navdeep et al in India reported exploratory laparotomies followed by cesarean sections [5,13].

The factors favoring the occurrence of these abdominal incisional hernia are well identified: obesity, tobacco, malnutrition, emergency surgery, infection of the scar during the previous intervention, postoperative efforts (carrying loads, cough, constipation). In general, anything that delays healing promotes the appearance of an abdominal incisional hernia [5,14]. In our series, we found parietal infections and obesity like majority of African authors [5,6,12]. Abdominal wall infection in our context is explained by the lack of means of protection of the wall during laparotomies for peritonitis and insufficient means of asepsis.

The management of abdominal incisional hernia is essentially surgical. It requires a raffia cure or a parietoplasty by prosthesis. The latter can be done by laparotomy or laparoscopic route. The laparoscopic route is the best because it reduces morbidity, postoperative pain and length of stay. The implantation site for prostheses can be intraperitoneal, preperitoneal, retro muscular prefascial, or premuscular – prefascial. Treatment with raffia is currently not recommended because it can cause recurrence with an incidence of up to 44%, unlike treatment with a prosthesis varying between less than 10% and 23% [2,15]. In our series, 80% of patients had benefited from parietoplasty by prosthesis with a follow-up of one year without recurrence. Not all the patients were able to benefit from prostheses due to lack of financial means, as in several African series [5,6].

The postoperative period is often marked by major complications, including seroma, hematoma, infection of the lining and infection of the prosthesis [2]. In our series, we noted only one case of wall infection and one case of seroma. Kanté et al., James et al., Berrada et al. reported mainly wall infections with an incidence of 4.4%, 6.6% and 2.7% respectively [5,6,16]. One of the dramatic complications of hiding is infection of the prosthesis, which in most cases requires revision surgery with its removal. The choice of implantation site is a factor influencing prosthesis infections.

Placing the prosthesis premuscularly exposes it to infection due to the superficiality of its topography. The laparoscopic approach with intraperitoneal prosthesis placement reduces postoperative and especially infectious complications. Biological prosthesis represents an ideal therapeutic approach in cases of prosthesis infection [2,14,15]. The mortality of this disease is low and due to essentially to comorbidities [2,6].

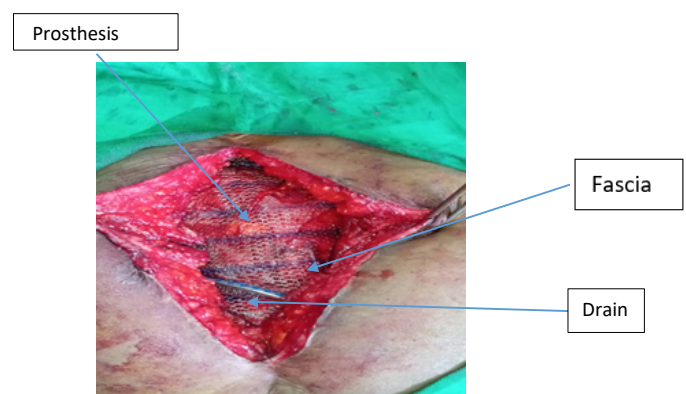
Conclusion

Abdominal incisional hernias are frequent but rare in our practice. They are a complication of abdominal surgery and recognize several contributing factors whom the most frequent are emergency surgery and obesity in our study. The lack of financial means in our poor countries hinders the generalization of the use of prosthesis in the management of abdominal incisional hernia.

Picture 1: Abdominal incisional hernia before surgical repair.



Figure 2: Abdominal incisional hernia repaired with prosthesis put in retro muscular prefascial.



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