



Research Article

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Clinical and Therapeutic characteristics of patients with abdominal hernias at the savalou Banté Hospital in Republic of Bénin

Bugamba Akonkwa Pascal^{*1}, Attolou Setondji Giles Roger², Muhindo Valimungighe Mo'žse¹, Paluku Katswere Josaphat³, Mupepe Kuba Alexis⁴, Joel Kambale Ketha⁵, Kumbusa Bwaleso Jack⁶, Amini Ntanama Rodrigue⁶, Avakoudjo Josué⁷, Mehinto Kuassi Delphin⁸

¹ Register in the Department of General Surgery, University Abomey-Calavi, Benin and Lecturer, Institut Supérieur de Techniques Médicales de Kanyamulande, South Kivu Province, DR Congo

² Lecturer, Faculté des sciences de la santé du Bénin, République du Bénin.

³ Register in the department of General surgery, General Referral Hospital of Virunga, Goma, DR Congo

⁴ Register in the department of General surgery, UVIRA Hospital, Uvira, South Kivu Province, DR Congo

⁵ Register in the department of Anesthesiology, Critical Care and Emergency Medicine, College of Medicine, University of Rwanda, Republic of Rwanda and Lecturer, Faculty of medicine, Université Catholique du Gabon, Butembo, DR Congo

⁶ Lecturer, Institut Supérieur de Techniques Médicales de Kanyamulande, South Kivu Province, DR Congo

⁷ Professor of Urology, Faculté des sciences de la santé du Bénin, République du Bénin

⁸ Professor of Visceral Surgery, Faculté des sciences de la santé du Bénin, République du Bénin

Abstract

Background: Abdominal hernias are frequent conditions in African's countries and mostly at Savalou-Banté Hospital in the Republic of Benin. The objective of this study was to determine the prevalence, clinical and therapeutic characteristics of abdominal hernias at Savalou-Banté Hospital in the Republic of Benin. **Methods:** This was a prospective study carried out from March 15, 2013 to August 31, 2018 including all patients with abdominal hernia. **Results:** Out of 146 procedures done in department of surgery at Savalou-Banté Hospital, 77 were abdominal hernias repair either 56.84%. Inguinal hernia was the commonest (88.76% of cases). Strangulated hernia was the main complication in 17.98% of cases (16/77). Herniorrhaphy was done in all hernias and Bassini technique was used for all cases of inguinal hernia. Mortality was observed in 6.5% (5 patients / 77). The median of staying in hospital was of 4.60 days. We noted a case of recurrence (5.26%). **Conclusion:** there still a dire need in management of abdominal hernias and hernia repair using mesh is in need. Early consultation will avoid the arising of complications.

Keywords: Abdominal hernias, Savalou-Banté Hospital, Cotonou, Republic of Benin.

INTRODUCTION

The abdominal hernias constitute a pathology known globally but mostly in African counties than Europeans [1, 2]. They are occasioned by any increasing of intra-abdominal pressure such as: ascites, pregnancy, constipation, chronic cough, asthma, emphysema, dysuria and a heavy labor [3]. The diagnosis is simply based on the clinic finding. The management is surgical and the herniorrhaphy is one of the most procedures done in abdominal surgery [4, 5, 6].

Abdominal hernias occurred in 15.8% of all abdominal Surgeries at the National Teaching Hospital of Cotonou following acute appendicitis and generalized acute peritonitis [7].

In Savalou-Banté Hospital, abdominal hernias are well and regularly managed; thus, the objective of this study was to determine the clinical and therapeutic characteristics of abdominal hernia at Savalou-Banté Hospital in Republic of Benin.

METHODOLOGY

This was a prospective study carried out from March 15, 2013 to August 31, 2018 including all patients with abdominal hernia. The diagnosis of the abdominal hernia was diagnosed clinically by an expansive and reducible abdominal swelling in the case of none strangulated hernia and non-expansive, irreducible and painful abdominal swelling in strangulated hernia.

*Corresponding author:

Bugamba Akonkwa Pascal

Register in the Department of General Surgery, University Abomey-Calavi, Benin and Lecturer, Institut Supérieur de Techniques Médicales de Kanyamulande, South Kivu Province, DR Congo

Email:

bugambapascal[at]gmail.com

Structured questionnaires were used to collect demographic and clinical characteristics such as: sex, age, profession, occurrence, circumstances of discovery, risk factors, location, clinical presentations and type of procedure done and duration of staying in hospital.

The data will be entered into Microsoft excel and checked for errors, then data will be exported into Epi Info 6.0. Significance of possible risk factors and relative risk were computed at 95% confidence interval and a p-value <0.05 as statistically significant. Confidentiality was observed during this study.

RESULTS

During our study period, out of 146 procedures done, 77 were abdominal hernias repairs either 56.84%.

Clinical presentation

i) Admission

The following table divide the patients with abdominal hernias regarding to the severity of clinical finding at the admission.

Table 1: Severity of symptomatology at the admission

Type of case	Effective	%
Elective	63	81.8
Emergency	14	18.2
Total	77	100

18.2% of patients had an emergency admission.

ii) Complaints on admission

The table following table divide the patients with abdominal hernias regarding their complaint on admission.

Table 2: Distribution of patients according to their complaint on admission

Complaints	Effective	%
Abdominal distension	77	100
Pain	16	20.77
Functional gene	10	12.99
Vomiting	01	1.30
Fever	02	2.60

All patients consulted with abdominal distension as a common complaint.

iii) Location of hernias

The table following table divide the patients with abdominal hernias regarding the location of the hernias.

Table 3: Distribution of patients according to the location of hernias

Location	Effective	%
Right painful Inguinal swelling	77	100
Right Inguinal swelling	16	20.77
Left painful Inguinal swelling	10	12.99
Left Inguinal swelling	01	1.30
Umbilical hernia	02	2.60
Medline hernia	-	-

iv) Procedure done

The table following table divide the patients with abdominal hernias regarding the procedure done.

Table 4: Distribution of patients according to the procedure done

Type of hernia	Procedure done	Effective, n=89
Medline hernia	Raphy	06
Umbilical hernia	Raphy	03
Inguinal hernia	BASSINI	79
Femoral hernia	Mac-Vay	01

Inguinal hernias were repaired using BASSINI technique.

v) Immediate post operative period

The table following table divide the patients with abdominal hernias regarding their immediate post operative period.

Table 5: Distribution of patients according to their immediate post operative period

Immediate post operative period	Effective	%
Simple	72	93.50
Hematoma	2	2.60
Wound bleeding	1	1.30
Acute urina retention	2	2.60
Total	77	100.00

Immediate post operative period was fine in 93.50% of hernia repair.

DISCUSSION

The prevalence of abdominal hernias found in this study (56.84%) is similar to those found by DIALLO *et al.* in Guinea (56.1%) [8]. On the other hand, they are higher than those found by BABATOUNDE at Borgou CHD and DIATEMA at CNHU-HKM in Cotonou which are respectively 12.6% and 17.8% [9, 10]. This difference would be justified, on the one hand, by the fact that our study was carried out in a rural environment where population lives on field works which require a lot of physical effort, risk factor of hernias; On the other hand, due to the fact that our study was done during the period of campaign of free management of hernia carried out in a rural area where field works lead hernias to occurre.

The prostate was enlarged in 25% of cases and diagnosed clinically and constitute a risk factor of abdominal hernias. This is justified by the fact that most of our patients were men in their fifties.

Clinically, 69 patients (79.52%) presented with one single mass which result was similarly found by others authors [11, 12, 13].

The recurrent found in 8.98% is higher than that found by KOMADAN K [12] which was of 2.68% at the Ouidah Hospital. This is due to the fact that all recurrent hernias were inguinal and had previously been operated by the tension method. The inguinal hernias (88.76%) are predominant followed by those of the midline (6.74%). This result is superior to that found by DIALLO A. *et al.* in Guinea-Conakry who found 49.2% of inguinal hernias out of all abdominal hernias [8]. MBAH N. *et al.* in Nigeria found a frequency of 76.9% of inguinal hernias [14]. This result, however, is closer to that found by FOFANA, which was 85.5% of inguinal hernias [15]. NILSON H. *et al.* in Sweden reported 97.3% of inguinal hernias among 107838 groin hernias operated during the same period [16].

The complication rate (20.24%) found in our study was higher than what of FOFANA who found 6.8% [15]. This rate is similar to those found by MEHINTO D. *et al.* [17] in Benin, MBOH N [14] and ADESUNKANMI AR. *et al.* [19] in Nigeria who found a prevalence of 26.05%, 20.6% and 22.4% respectively. All these studies show that strangulated hernia remained a common reason for consultation in Africa. This is due to the fact that patients consult once the mass presents the pain, sign of strangulation.

All patients underwent open surgery (laparotomy) and the type of incision depended on the type of hernia and the surgeon's habits.

The use of open surgery is largely justified by the insufficient technical platform at Savalou Bantè Hospital, site of this study. The repair was performed by a technique "with tension" (herniorrhaphy) for all patients. BABATOUNDE A. [9] at CHD-Borgou in Parakou reported 94.8% of herniorrhaphies with tension against 5.2% of herniorrhaphy without tension and DIATEMA S. [10] at CNHU-HKM in Cotonou reported 98.3 % of herniorrhaphies with tension against 1.7 of plasty. This difference would be due to the fact that their studies took place in teaching Hospitals, well equipped in instruments and surgeons. In contrast, in Europe, BARRAT C. *et al.* [19] reported a tendency for "tension-free" wall repairs for laparoscopy. According to the authors, in twelve years, raphy techniques decreased from 92.9% to 14.6% while plasty techniques increased from 9.1% to 85.4%. The lack of use of plasty repair in our environments in general and Savalou in particular is partly due to precarious socioeconomical conditions which do not allow the acquisition of meshes costly for our patients, on the other hand by a precarious hygienic conditions, source of infection while performing plasty technique.

For inguinal hernias, the BASSINI technique was done in all patients, while simple hernia repair was done in others hernias, whereas FOFANA [15] found that the most used method was that of SHOULDICE with 47.69% followed by that of BASSINI (26.15%). We believe that the method of BASSINI is more used in Savalou because of the profile of the training of the surgeon and because of the ease of its realization.

The epigastria artery and bladder were injured accidentally in one case each. DIATEMA S. at CNHU-HUM Cotonou had found two (02) cases of epigastria artery injury, one (01) case of bladder injury [10]. These observed incidents allow us to say that the hernia repair is not always a simple procedure and requires the surgeon to be focused during the procedure. The post operative period was without complications in 93.50% which looks similar to that found by many authors including GALLEGOS N.C. *et al.* who found 94.9% [20]. But postoperative complications were dominated by hematoma and acute retention of urine in 2.6%. The postoperative hematoma is justified by the fact that the theater does not have a diathermy for coagulation of blood vessels which bleed while surgery. Acute urina retention was due to the anesthesia.

CONCLUSION

Abdominal hernias are common at Savalou-Bantè Hospital. They affect young people, mostly male, exercising a heavy labor and uneducated.

Diagnosis was done clinically and surgical procedure done followed by unremarkable postoperative period. Early consultation, availability of instruments and surgeons are needed to improve and standardize the management of hernias at Savalou-Bantè Hospital.

Authors' Contributions

This work was carried out in collaboration between all authors.

Competing Interests

Authors have declared that no competing interests exist.

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