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Research Article

REINTERVENTIONS AFTER ABDOMINAL SURGERY AT PANZI GENERAL REFERRAL HOSPITAL IN BUKAVU, DEMOCRATIC REPUBLIC OF THE CONGO

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A B S T R A C T

Aim: This study aimed to identify the epidemiological aspects, analyzing indications, management and outcomes of reoperations in abdominal surgery, at the PanziGeneral Referral Hospital (GRH) in DRC.

Patient and methods: We carried out a retrospective study of 67 patients re-operated at the PanziGRH, of whom 38 have been transferred from other medical institutionsand 29 surgical resumptions from the 946 cases initially operated at PanziGRH, from January 1st, 2012 to December 31st 2015.All abdominal surgical resumptions performed during the study period were selected. Variables investigated were indications of initial laparotomy, symptoms, reoperation indications, intraoperative diagnosis, and postoperative follow-up.

Results: Frequency of surgical resumption for cases initially treated at PanziGRH was 3.1% (29 out of 946 cases of abdominal surgery).The female sex was more touched with 37 cases (55.2%) and with a sex ratio of 1.2. The most affected age group is between 21 and 30 years oldin29.9%. Acute peritonitis of various causes was the most frequent indication of initial diagnosis with 36 cases, (53.6%), obstetrical cause (uterine rupture, VA, etc.) with 11 cases (16.4%).Enteral fistula was the main indication of surgical resumption with 43 cases (64.2%).The number of surgical resumption was 3 to 5 times in 45 cases (67.1%).58.8% of patients had a hospital stay between 41to 60 days and 17 patients died (25.4%) mainly due to septic shock in 58.8%.

Conclusion: Reoperations after abdominal surgery are frequent in our working conditions. Most patients are referred from other medical facilities. The organization of comprehensive medical and surgical care services, including resuscitation, are a necessity to reduce the abdominal reoperation rate.

INTRODUCTION

Abdominal surgery may be followed by complications that may motivate a reoperation. The frequency of these reoperations can reach 7% [Schneegansh 1984, Wain 1987, Krasil'nikov 1992]. Mortality and morbidity can be higher and increase significantly if the initial intervention is performed for septic reason [Wain 1987, Krasil'nikov 1992, Malik 2010]. Complications such as postoperative hemorrhage, intra-abdominal infections, intestinal obstruction and anastomotic leaks were described as being the main cause of reoperation. Some of these complications may result from technical faults [Krasil'nikov 1992, Machodo 1994, Rabin Koirala 2015, Ching 2003].

The global prevalence of postoperative complications varies from a country to another and in the same country it varies from a region to another. It varies between 10 -15% [Delmee 2004]. Some of these complications often require a new surgical procedure.

In Western countries, the preoperative evaluation of patients for reoperation is based, in addition to clinical criteria and imaging technics (ultrasound, CT scan in particular), on the use of clinical scores (Acute Physiology And Chronic Health 5 (Apache II)) and also on the diagnostic and therapeutic laparoscopy [Ching 2003, Kriger 2003]. Intra-abdominal septic complications are less frequent. Their rates range between 1.6-3.3% [Champault 1982, Reerrarid 1983, Guivarch 1980, Hinsdale 1984]. However, they represent a half of the early re-interventionsindications and the main cause of death in abdominal surgery [14].

Thus, in a study conducted in Paris (2004-2006), surgical resumption due to the surgical site infection represented about 40% of all reoperations. The same study showed that since 2004, there was a voluntary policy of surgical site infection monitoring in Paris [15].

In another study carried out in Montpellier (France), it has been shown that a large majority of early reoperations in digestive surgery aimed to treatdiffusedor localized intra-

peritoneal infections. The same study showed that other causes that could lead to surgery resumption are essentially surgical site or drainage path bleeding, gastrointestinal bleeding on acute peptic ulcer, or on the anastomosis edges, acute bowel obstruction, acute aggressive cholecystitis or eviscerations [16].

In Cameroon, out 7714 patients operated by laparotomy, 277 (3.6%) were re-operated [17]. In the Democratic Republic of Congo (DRC) in general, and Bukavu in particular, the abdominal reoperations have not yet been documented.

Therefore, this study aimedto identify the epidemiological aspects, analyzing indications, management and outcomes of reoperations in abdominal surgery, at the PanziGeneral Referral Hospital (GRH) in DRC.

Patient and Methods

The PanziGeneral Hospital is the referral medical institution of the Ibanda Health Zone in Bukavu. We carried out a retrospective study of 67 patients re-operated at the PanziGRH, of whom 38have been transferredfrom other medical institutions and 29 surgical resumptions from the 946 cases initially operated at PanziGRH.

All abdominal surgical resumptions performed during the study period were selected.Patients initially operated for pathology regarding urology, those operated by laparoscopy and those whose records were not exploitable were rejected.
The following variables were investigated: indications of initial laparotomy, symptoms, reoperation indications, intraoperative diagnosis, and postoperative follow-up.

Statistical analyses were carried out by using the Epi-info and Excel software's for frequencies and averages calculation.

RESULTS

Frequency

Except referred cases, the frequency of surgical resumptionfor cases initially treated atPanziGRH was 3.1% (29 out of 946 cases of abdominal surgery).

Epidemiological, clinical and therapeutic aspects

The comming table shows the following main results

- The female sex was more touched with 37 cases (55.2%) and with a sex ratio of 1.2.
- The most affected age group is between 21- 30 years old (29.9%)
- Acute peritonitis of various causes was the most frequent indication of initial diagnosis with 36 cases (53.6%), followed by obstetrical cause (uterine rupture, VA, etc.) with 11 cases (16.4%).
- Enteral fistula was the indication of surgical resumption with 43 cases (64.2%).
- The number of surgical resumption was 3 to 5 times in 45 cases (67.1%).
- Most of our patients had a hospital stay between 41to 60 days in 36 cases (58.8%),
- 17 patients died (25.4%) mainly due to the septic shock (10/17 cases) in 58.8%.

DISCUSSION

Frequency of surgical resumptions

Apart from referred cases, the frequency of surgical resumptions for cases initially treated atPanziGRH was 3.1% (29 cases out of 946 of abdominal surgery). These results are related with those found by Chichom*et al.* in their study on abdominal surgery re-interventions in a poor environment in Cameroon. They reported a frequency of 3.6% (n = 277 out of a total of 7714 operated during seven years) [17].

Table 1 Epidemiological, clinical and therapeutic aspects (n= 67).

Variable	n	%
Sex		
Female	37	55.2
Male	30	44.8
Age group (years)		
0-10	9	13.4
11-20	15	22.4
21-30	20	29.9
31-40	14	20.9
41-50	4	6.0
51-60	4	6.0
>60	1	1.5
Initial diagnosis		
Acute peritonitis of various etiologies	36	53.6
Obstetric causes (uterine rupture, VA, etc.)	11	16.4
Acute appendicitis	4	6.0
Recto-vaginal occlusion	3	4.5
Inguinal hernia	2	3.0
Hemoperitoneum	2	3.0
Gastrictumor	2	3.0
Others (colonic tumor, cholecystitis, hepatic cyst, ovarian cyst, abdominal mass)	5	7.5
Surgicalresumption indications		
Enteralfistula	43	64.2
Stercoral fistula	18	26.8
Recto-vaginal fistula	4	6.0
Biliaryfistula	2	3.0
Number of surgicalresumptions		
≤ 2	12	18.0
3-5	45	67.1
6-8	9	13.4
>8	1	1.5
Hospitalstay duration (days)		
≤ 20	5	7.5
21-40	18	26.8
41-60	36	58.8
61-80	25	37.3
>80	3	4.5
Evolution		
Recovery	50	74.6
Death	17	25.4
Mortality causes		
Septicshock	10	58.8
Multiple visceralfailure	7	41.2

Sex

This study showed that female was almost more affected with a sex ratio of 1.2 or 55.2%. Bahi, in his study on surgical resumptions in digestive pathology carried out at the Mohamed 5 military training hospital in Rabat, reported a predominance of male (72%) [18].Thisunrelated result can be explained by the fact that he investigated a military specimen known to be male predominant.

Age

Our study showed that the most affected age group was between 21-30 yearswith a frequency of 29.9%. This finding

is different from an average age of 54 years found by Bahi in his study on digestive surgical resumptions [18]. This is due not only to the fact that surgical digestive pathology is relatively less frequent in young subjects in Morocco but also by the difference in the pathologies incriminated in the occurrence of peritonitis [19].

Indications of surgical resumptions

This investigation has shown that enteral fistula was the first indication of all cases of surgical resumption with 64.2%. Bahi, on the other hand, observed that postoperative peritonitis was the main indication of re-laparotomy with 76% of cases [18]. Rambaud *et al.* [15], as well as Chichom*et al.* [17] found respectively operative site infection and postoperative peritonitis as the main indications of re-interventions.

Hospitalstay duration

Our study showed that most patients had a hospital stay for more than 60 days, or 35.9% of cases. However, Bahi's study in Rabat has shown a length of stay in the intensive care unit of 7 to 8 days and a hospital stay of 27 to 35 days shorter than in the planned re-laparotomy strategy [19].

Number of surgical resumption

The results showed that the resumption numbers were 3 to 5 times with 45 cases or 67.1%. However, Hssaida*et al*. in their studies of postoperative peritonitis in the elderlyobserved that resumption were 3 times with a mortality rate of 100% [20].

Evolution of patients

This study found a mortality rate of 25.4%. These results are close to those found by Bahi whoreported an overall mortality rate of 28% in his study on digestive surgical resumption [18].

The findings revealed that causes of death were septic shock or multi-visceral failure in the majority of cases. Dieng*et al*. in their study on the etiological and therapeutic aspects of acute generalized peritonitis of digestive origin also found that 9.1% of the causes of death were septic shock or multi-visceral failure [21].

CONCLUSION

Reoperations after abdominal surgery are frequent in our working conditions. Most patients are referred from other medical facilities. Women and youth are the most affected.

Enteral fistula is the first indication encountered. Awareness of doing surgery only when the physical and human conditions are improved can help reduce the high number of re-interventions.

The organization of comprehensive medical and surgical care services, including resuscitation, are a necessity to reduce the abdominal reoperation rate.

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