Journal of Current Medical Research and Opinion
Received 10-07-2022| Revised 24-07-2022| Accepted 29-07-2022| Published Online 04-08-2022

DOI: https://doi.org/10.52845/CMRO/2022/5-8-3

ISSN (O) 2589-8779 | (P) 2589-8760

CMRO 05 (08), 1291-1295 (2022)

Research Article

Right Ileo-Colic Intubation at the University Hospital of Kamenge: Preliminary Results. About 7 Cases

Mbonicura JC[1*] | Niyokwizera KC[1] | Nduwimana F[1] | Bizoza Y[1] | Kamatari D[1] | Amani Moibeni[2] | Ngomirakiza JB[2]

[1]University of Burundi, Centre Universitaire de Recherche en Santé (CURSA), General and Digestive Surgery

[2]University of Burundi, University Centre for Health Research (CURSA), Gastroenterology

[*]Correspondance:

Dr Mbonicura Jean Claude, BP 1020 Bujumbura Burundi,

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Abstract

Objective: To describe the advantages of the right ileo colic intubation technique

Patients and methods: This is a prospective descriptive study of right ileo colic intubation at the Kamenge University Hospital (CHUK) in the visceral surgery department over a period of 12 months from 1 January to 31 December 2021. The study focused on patients who underwent the right ileocolic intubation technique at CHUK during this period.

Results: Out of two hundred and sixty-four emergency surgical procedures performed in the visceral surgery department during the study period, we recorded seven cases of right ileocolic intubation, i.e. a frequency of 2.6%. The average age of the patients was 22 years. The sex ratio was 1.3. Transfer for suspected acute abdomen was the most frequent reason for consultation (57.1%). Intraoperative diagnoses were: ileal perforation peritonitis (42.8%), ileal strangulation peritonitis with Ladd's flange (14.2%), strangulated umbilical hernia with ileal perforation (14.2%), Richter's hernia (14.2%) and small bowel obstruction (14.2%). In these patients, right ileo-colic intubation was performed and the postoperative course was simple without complications. The average hospital stay was 41 days. The postoperative follow-up was one month.

Conclusion: Right ileocolic intubation is a simple technique, easy to learn and associated with low morbidity.

Key words: Peritonitis, Ileal perforations, Right ileocolic intubation, Kamenge University Hospital.

Introduction:

In 1989, the right ileo-colic intubation technique was developed by Veillard at the main hospital in Dakar. This technique has shown its advantages in particular in the context of generalised peritonitis due to typhoid ileal perforation but also in non-cancerous lesions of the terminal ileum [1]. This technique is simple and rapid. It also avoids the need for ileocecal resections, which are prone to numerous complications. The Veillard technique was developed to avoid suturing in a septic environment and on a poor quality wall that could lead to anastomotic release [1, 2]. This technique was initially extended to several other situations including ileal necrosis due to various causes (strangulated hernia, volvulus on flange). Many schools continue to advocate excision-suture techniques for single perforations and resection-anastomosis techniques for multiple perforations [3-6]. In Burundi, a study of non-traumatic gastrointestinal perforations showed that the type of surgical procedure was correlated with the mortality rate [7]. At the university hospital of kamenge (CHUK), a study on the predictive factors of mortality of mechanical acute intestinal obstructions carried out in 2021 showed that mortality was higher in patients who had undergone a one-stage resection-anastomosis in 60% of cases of mechanical acute intestinal obstruction [8]. Thus, this study motivated the introduction of a new technique consisting of right ileo-colic intubation, the principle of which consists of a trans-colic ileostomy without true anastomosis [1, 9].

The objective of our work was to describe cases of right ileocolic intubation performed at the Kamenge University Hospital and evaluate the preliminary results of the technique.

Patients and methods

This was a prospective descriptive study conducted in the Department of General Surgery at Kamenge University Hospital over a 12-month period from January 2021 to December 2021. It included all patients in whom right ileocolic intubation was performed. Patients in whom right ileocolic intubation was performed outside Kamenge University Hospital were excluded from the study.

The variables studied were age, sex, reason for consultation, physical signs, indications and outcome.

Documents such as medical records, major procedure registers and operative reports were used for data collection. Data entry and analysis were performed using Microsoft Word and Excel 2016

Results:

Out of 264 emergency surgeries performed in the visceral surgery department during the study period, we recorded 7 cases of right ileocolic intubation, a frequency of 2.6%. The average age of the patients was 22 years with extremes ranging from 5 to 56 years. The female sex was the most represented with a sex ratio of 1.3. Transfer for suspected acute abdomen was the most frequent reason for consultation (57.1%).

The physical signs presented by the patients were: abdominal distension and pain in 71.4% of cases, umbilical swelling, right inguinal swelling followed by right inguinal purulent fecal discharge and post hysterectomy parietal suppuration in 14.2% of cases each.

Intraoperative diagnoses were: ileal perforation peritonitis (42.8%), ileal strangulation peritonitis with Ladd's flange (14.2%), umbilical strangulated hernia with ileal perforation (14.2%), Richter's hernia (14.2%) and small bowel obstruction (14.2%).

In these patients, right ileo-colic intubation was performed after a standby ileostomy in 5 of the 7 patients. The postoperative course was straightforward, with none of the operated patients experiencing any of the possible postoperative complications, which included non-transit, rectal bleeding, fistula or anastomotic stricture. The average hospital stay was 41 days. Post-operative follow-up was one month.

Discussion:

The main objective of our work was to describe cases of right ileocolic intubation performed at the Kamenge University Hospital. Right ileocolic intubation represented 2.6% of the emergency procedures performed during the study period.

The average age of our patients was 22 years with extremes ranging from 5 to 56 years. In the study on right ileocolic intubation in case of necrosis of the last ileal loop by Owono-Mbouengou J.P et al [10], the mean age was 35 years with extremes from 24 to 39 years. For the study on the interest of the Veillard technique in case of typhoid perforations of the small intestine by Gnassingbe et al [2], the average age was 8 years with extremes from 5 to 13 years. Concerning sex, in our study, the sex ratio was 1.3. According to the study by Owono-Mbouengou et al [10], their case series consisted of 3 females and one male with a sex ratio of 3. In their study, Gnassingbe et al [2] found a sex ratio of 2.5.

In our study, the intraoperative diagnoses were ileal perforation peritonitis in 42.8%, ileal strangulation peritonitis with Ladd's flange, umbilical strangulated hernia with ileal perforation, Richter's hernia and small bowel obstruction in 14.2% of cases each.

According to the study by Owono-Mbouengou et al [10], the aetiology of the ileal injury was a flange occlusion with extensive small bowel necrosis in 2 cases, a tubo-ovarian abscess with necrosis and perforation of the last ileal loop in one case and aspecific ileitis in one case. Ribault L et al [1] in their study on right ileo-colic intubation for peritonitis by ileal perforation, 5 necroses of the terminal ileum for various causes were treated with good results: 1 case of neglected strangulated hernia and 4 cases of volvulus on flange with necrosis. Gnassingbe et al [2], in their study, ileo-caecal intubation was performed in children who had a typhoid perforation of the small bowel.

The technique of right ileo-colic intubation as implemented by Veillard, for the treatment of typhoid perforations of the small intestine, can be applied to all other non-cancerous lesions reaching the terminal ileum and to ileal resections too close to the right colon, when the distal segment of the ileum no longer allows an anastomosis (10). This is consistent with the indications for the technique reported in the results of our study.

In our series, the average hospital stay was 41 days. This can be explained by the fact that, depending on the local conditions observed during the operation, an ileostomy was performed for five of the seven patients followed, before continuity was re-established, thus lengthening the duration of hospitalisation. Indeed, in their study at CHUK on postoperative diffuse intra-abdominal sepsis, Mbonicura JC et al [10] found that anastomotic release and necrosis were the main etiologies of postoperative diffuse intra-abdominal sepsis (PDIAS), i.e. 42.8% and 21.42% respectively, results similar to those found in some African studies [12-14]. Knowing that the mortality rate of SIADPO varies in the literature between 11 and 40% [12,15-18], ileostomy before the resumption of continuity finds its indication in certain situations to avoid in particular this release which can be a source of these SIADPO.

In the study by Owono-Mbouengou et al [10] , the average length of hospitalisation was 1 month. This duration was 13 days in the study by Gnassingbe et al [2].

In our study, the postoperative course was simple and no postoperative complications were noted. In the study by Owono-Mbouengou et al [10], morbidity and postoperative mortality were zero. There were no postoperative complications. This is similar to our study.

On the other hand, Gnassingbe et al [2] in their study, apart from the loosening of the suture noted in their series, all the patients had presented with profuse diarrhoea after the operation. This diarrhoea did not benefit from any particular treatment apart from parenteral rehydration. Ribault L et al [1] described an early postoperative occlusion related to intubation stenosis observed on the fifteenth postoperative day due to technical malfunction by an inexperienced operator and a

digestive fistula observed on the seventh postoperative day in a 10 year old child that was spontaneously resolved in two days. Owono-Mbouengou et al [10] in their study, the postoperative follow-up was 1 month and was without any particularities which is superposable to our study.

Conclusion:

The technique is of considerable value in emergency situations in distal ileal perforations and results in fewer postoperative complications.

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