GSC Advanced Research and Reviews

eISSN: 2582-4597 CODEN (USA): GARRC2

Cross Ref DOI: 10.30574/gscarr

Journal homepage: https://gsconlinepress.com/journals/gscarr/

(CASE REPORT)

Volvulus with sigmoid necrosis in children: Two cases observed at Ignace Deen Hospital

Fofana Houssein [1], Camara Soriba Naby [2,*], Keïta Karim [1], Fofana Naby [1], Soumaoro Labile Togba [1] and Diallo AissatouTaran [1]

[1] *Department of General Surgery Ignace Deen National Hospital Faculty of Sciences and Health Technic Gamal Abdel Nasser of Conakry, Conakry Guinea.*

[2] *Department of Visceral surgery Friendship Hospital Sino Guinean Faculty of Sciences and Health Technic Gamal Abdel Nasser of Conakry, Conakry Guinea.*

GSC Advanced Research and Reviews, 2021, 09(01), 028–031

Publication history: Received on 28 August 2021; revised on 04 October 2021; accepted on 06 October 2021

Article DOI: https://doi.org/10.30574/gscarr.2021.9.1.0227

Abstract

Introduction: We report the clinical observation of 2 cases of volvulus with sigmoid necrosis in children.

Observation: Two male patients, aged 12 and 15, were hospitalized with acute mechanical bowel obstruction. There was an asymmetric, motionless meteorism and rectal emptiness.

X-rays of the abdomen revealed an arch.

Laparotomy found volvulus with necrosis of the sigmoid colon.

The Hartmann-type colostomy and the ideal colectomy were the surgical procedures.

Conclusion: Sigmoid volvulus is a rare abdominal emergency in children and severe in the necrosis stage.

Keywords: Sigmoid volvulus; Necrosis; Occlusion: Surgery

1. Introduction

Colon volvulus is a rare and serious abdominal surgical emergency. The etiology of volvulus is multifactorial, including important predisposing factors. It is generally reported in patients with chronic constipation. A high incidence reported in Africa has been attributed to the diet rich in plant fiber in this population [1,2].

Untreated, the spontaneous development is ischemia, then necrosis of the volvulated intestinal segment [3].

2. Observation

Two patients aged 11 and 14, all male, were referred to us for a sudden occlusive syndrome. The consultation times were 3 and 5 days. The

* Corresponding author: Camara Soriba Naby
Department of Visceral surgery Friendship Hospital Sino Guinean Faculty of Sciences and Health Technic Gamal Abdel Nasser of Conakry, Conakry Guinea.

abdominal pain was diffuse throughout the abdomen, accompanied by nausea, vomiting, and cessation of materials and gas.

One of the patients is said to have ingested decoctions without improvement. The second would have, in addition to traditional therapy, consulted late in a health center and treated for gastroenteritis before being referred to our establishment. The notion of chronic constipation goes back between 5 and 9 years, evolution. Both patients were used to laxatives and had a cereal-based diet (especially rice).

The patients were conscious, the conjunctivae and integuments were pale. Their general condition was altered on admission. There was physical asthenia, anorexia, fever, accelerated pulse (at 116 and 104 / minute), drop in BP (80/60 mmHg and 95/50 mmHg). A tachypnea (32 and 28 / minute).

Physical examination found a distended, asymmetrical, motionless abdomen with elastic arching, tusk, declining dullness, and epigastric tympanism. There was an auscultatory silence, There was a rectal emptiness. The douglas cul de sac was bulging and tender in the first patient. The hernial orifices were free.

Pleuropulmonary and Cardiovascular auscultation was without particular pathological sounds.

X-ray of the abdomen without preparation upright from the front showed an arch, hydro-aeric levels. The preoperative biological assessment showed hypokalaemia, hyperleukocytosis, anemia (Hb = 8.5g / dl in the first patient and 9g / dl in the second). Their blood groups (O + and A +).

Preoperative resuscitation preceded surgery. The patients were intubated and the route of entry was a xyphopubic median. Laparotomy revealed pelvic colon volvulus in both patients with sigmoid necrosis. A large pyostercoral effusion was present in the first patient and a sigmoid megadolichocolon in the second patient (Figures 1 and 2). We took a sample of the liquid for the culture, the aspiration of 1200ml of spilled liquid. In the first patient, a Hartmann-type colostomy was performed which was restored 2 months later. The ideal colectomy was performed in the second patient.

The outcome was favorable in the first patient and unfavorable in the patient who had the ideal colectomy.

3. Discussion

Volvulus is rare in children. The authors stress the rarity of this etiology and reported two cases in newborns and cases associated with Hirschsprung's disease [4].

The male predominance is thought to be linked to the association of a tall and wide mesosigmoid and a narrow root predisposing to volvulus. In Africans, dolichosigmoid is the factor most often incriminated [5].

In terms of diagnosis: there was a delay in diagnosis because patients consulted specialized structures late because of self-medication, traditional therapy and the rarity of this condition in children. It was at the stage of necrosis that the patients were admitted and operated on. The authors reported a 22.02% rate of necrosis in volvulus due to the long consultation time [6].

Abdominal pain, sudden cessation of the flow of materials and gases, and meteorism were the main clinical signs of the occlusion. In the necrosis stage, colonic torsion pain had given way to peritoneal irritation from the septic fluid effused from the strangulation. Abdominal meteorism is an important sign that should point the clinician towards colon volvulus, especially when it is asymmetric.

The unprepared x-ray of the abdomen was the most accessible examination leading to the diagnosis. Signs of digestive distress led to emergency surgical exploration.

All of our patients had necrosis of the volvulated colon. The first patient presented the worst general condition with a pyostercoral collection.

3.1. In terms of treatment

Resuscitation must be rapid, efficient and continued throughout the perioperative period. Surgery should not be delayed.

The choice of technique will depend on the condition of the loop and the general condition of the patient. The best emergency surgical management is resection and shunt with secondary anastomosis [6].

In our case, we performed Hartmann's intervention in the first patient who presented in addition to necrosis in very poor general condition with a large pyostercoral collection. The ideal colectomy was performed on the second patient.

It is preferable to perform an ideal colectomy in the absence of colonic necrosis in patients in good general condition. Hartmann's intervention is indicated for necrosis of the volvulated colon in patients with poor general condition [7].

3.2. In terms of prognosis

Sigmoid volvulus is an exceptionally rare but potentially fatal condition in children [8].

The outcome was favorable in the patient who had Hartmann's procedure while the one who had the ideal colectomy died on the second postoperative day with a picture of septic shock.

For a better prognosis, one-step anastomosis resection in the context of intestinal necrosis and sepsis is often disappointing and must be replaced by colostomy coupled with effective and continuous resuscitation.

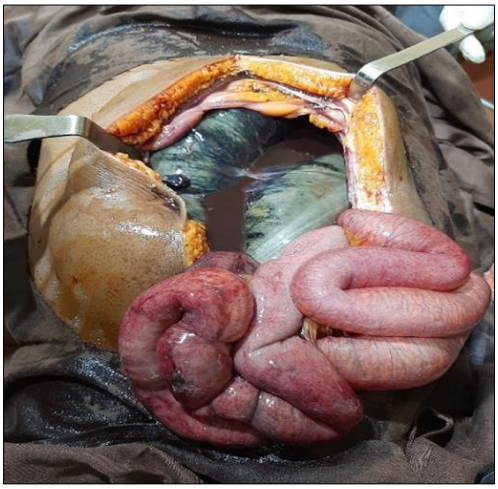

Figure 1 Operative view, sigmoid volvulus and necrosis with pyo stercoral effusion

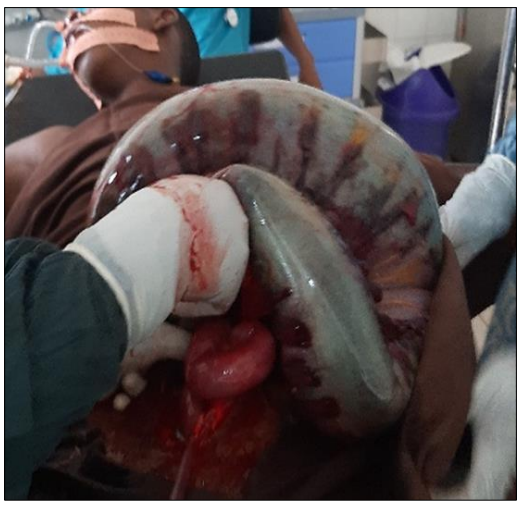

Figure 2 Neurotic sigmoid colon volvulus + dolichomegacolon

4. Conclusion

Pelvic colon volvulus is a serious and rare abdominal emergency in children. The delay in surgical management leads to necrosis. The poor general condition of the patients and the immediate anastomosis in the context of septic necrosis are detrimental to the prognosis.

Compliance with ethical standards

Acknowledgments

Through this article, we would like to thank our dear teacher, Professor Aissatou Taran DialloBiro Diallo, for her effort to improve the scientific quality of this work.

Disclosure of conflict of interest

The authors declare no conflict of interest

Statement of informed consent

All of the authors who appear in this article have an equal share of and agree to the publication of this article in your journal.

References

[1] So Yoon Choi, Ki Hoon Kim. Recurrent attacks of sigmoid volvulus in a 16-year-old boy: A case report Adv Pediatr Surg. 2020; 26(1): 28-32.

[2] Gerardo Rivera, Saliou Surani, Joseph Varon. Sigmoid volvulus: an image telling the story crit care shock. 2019; 22: 285-287.

[3] Lubrano J, Paquette B, Delabrousse E, Koch S, Mantion G. Volvulus du sigmoïde - 2012 Elsevier Masson SAS. 02/06/12.

[4] Valla JS, Louis D, Berard J, Jaubert M, Beaujeu MJ. Volvulus du sigmoïde chez l'enfant. A propos de 6 observations. Chirurgie pédiatrique. 1982; 23(2): 93-6.

[5] Pastore V, Basile A, Cocomazzi R, Pastore M, Bartoli F. Volvulus du sigmoïde chez un nouveau-né : à propos d'un cas et revue de la littérature. Afr J Paediatr Surg. 2013; 10(4): 390-2.

[6] Hama Y, Kadi I, Elh Lamine H.Z, Sani R. Harouna YD. Prise en charge des volvulus du côlon sigmoïde Journal Africain d'Hépato-Gastroentérologie. 2017; 11: 68–71.

[7] Choua Ouchemi, Kaboro Mignagnal, Ali Mahamat Moussa, Ahmat Malgnan Okim, Moussa Kalli M, Ndjianone Kalkin. résultats du traitement du volvulus du sigmoïde à N'djamena, Tchad European Scientific Journal. July 2015; 11(21).

[8] Chang PH, Jeng CM, Chen DF, Lin LH. A propos d'un cas et revue de la littérature sur le volvulus du sigmoïde chez l'enfant Chem. Rév. 2007; 107: 2411-2502.