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OGILVIE'S SYNDROME: CASE REPORT OF SPONTANEOUS RUPTURE OF THE CEACUM FOLLOWING CAESAREAN SECTION

Omondi-Ogututu, MBChB, MMed, PGDRM, Associate Professor, Department of Obstetrics and Gynaecology, University of Nairobi, J. Adwok, MBChB, MMed, PhD, Associate Professor, Nairobi Hospital, N. Nganga, MBChB, MMed, consultant Nairobi Hospital, E. Rogena, MBChB, MMed, PhD, Associate Professor and P. Olang, MBChB, MMed, PGDRM, Senior Lecturer, College of Health Sciences, University of Nairobi, P. O. Box 19076-00202, Nairobi, Kenya

Request for reprints to: Prof. Omondi-Ogututu, Department of Obstetrics and Gynaecology, University of Nairobi, P. O. Box 76492-00508, Nairobi

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OMONDI-OGUTUTU, J. ADWOK, N. NGANGA, E. ROGENA and P. OLANG

SUMMARY

In acute colonic pseudo-obstruction (ACPO) there is colonic distension without an organic obstacle (intrinsic or extrinsic to intestinal wall). This becomes a potential site of caecal rupture which can lead to the demise of the patient. Presented is a case of a mother who had spontaneous caecal rupture five days after Caesarean delivery. At Laparotomy the caecal rupture was confirmed and a colostomy was done. The patient succumbed in Intensive care unit two days post-operatively.

INTRODUCTION

Spontaneous rupture of the caecum is a rare medical and surgical condition that can occur in women who have undergone Caesarean delivery, usually they have no previous underlying medical condition. Some of the known predisposing factors includes spinal anaesthesia. This can lead to maternal morbidity and mortality especially in patients with rupture of the caecum. The outcome is dependent on early diagnosis and correct management instituted. We present the first reported case in Kenya of spontaneous Caecal rupture following Caesarean delivery. She had laparotomy done with a colostomy but succumbed while in the intensive care unit two days later.

CASE REPORT

Mrs. BM, a Para 0+0 was admitted to The Nairobi Hospital in July 2013, with complaints of abdominal pains and distention, vomiting, fever and loose motion. The distention occurred three days after discharge from the hospital where she had been delivered by uneventful elective Caesarean section due to previous history of myomectomy. At Caesarean section there was no evidence of adhesions. The outcome was twin delivery at a gestation at 37 weeks with good outcome. She previously had a history of infertility for eight years, in 1999 she had a myomectomy due to large uterine myomas. Following her inability to achieve conception she was advised on *In vitro* fertilization, this was carried out in February

2012 and she achieved conception at the first cycle.

On admission, she was sick looking and mildly pale. Her vital signs were as follows: BP 100/60 mmHg, RR, was 26 bpm, Temp 37.2°C, P02 92%. The abdomen was markedly distended, with reduced bowel sounds. Rectal exam revealed no stool impaction. The laboratory investigations showed: Hb 11.3 mg/dl, urea 7.9 mmol/L, creatinine 64 umol/L, potassium 4.2mmol/L and sodium 144mmol/L which were all normal. The liver enzymes were elevated Alkaline phosphatase 368U/L, Gamma GT 103 U/l and CRP 273 mg/l.

Of the radiological investigations: Plain Abdominal X ray (Figure 1) revealed free gas in the abdomen with dilated bowel loops. Chest X Ray (Figure 2) showed gas under the diaphragm. A diagnosis of gut perforation was made and the patient was prepared for emergency laparotomy.

Intra-operatively, there was free gas in the abdomen, the bowel loops were noted to be distended with evidence of peritonitis. On further exploration of the abdominal cavity the caecum was noted to be adherent to the right posterior wall of the abdomen with some areas of necrosis the rest of the small bowel and colon were normal. The caecum was dissected and released from the area of adherence and a caecal perforation was noted. The caecum was brought out through the skin incision at the right iliac fossa and sutured to the skin directly. Post-operatively the patient was admitted to the Intensive Care Unit for monitoring and respiratory support. She improved but aspirated on extubation twenty-four hours post-

operatively. Thereafter her condition deteriorated and she developed a cardiac arrest 48 hours later.

Figure 1
Lateral decubitus of the abdomen

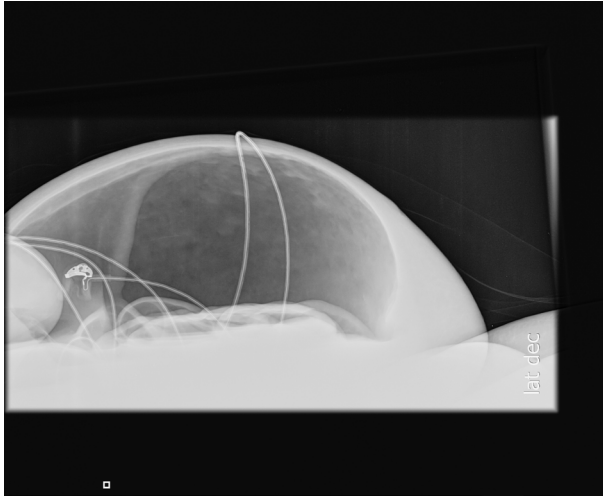
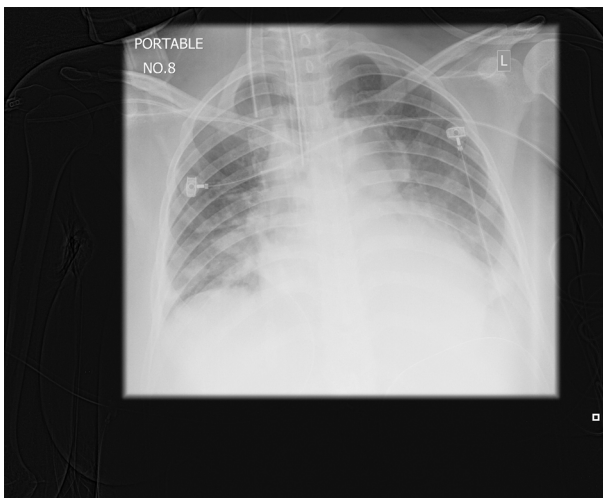


Figure 2
Chest X Ray the abdomen is markedly distended with marked free peritoneal air with dilated loops of bowel



A left basal opacity likely to be an infective process. The heart appears enlarged possibly due to AP projection. There was free air seen under the diaphragm. There was grossly distended bowel seen in the abdomen

DISCUSSION

In acute colonic pseudo-obstruction (ACPO) there is colonic distension without an organic obstacle (intrinsic or extrinsic to intestinal wall) (1). On the other hand, in spontaneous perforation of colon (SPC), there is a sudden onset of perforation in apparently healthy colon in the absence of any disease or injury (2, 3). Depending on the clinical presentation it can be acute or chronic.

The ACPO also referred to as Ogilvie syndrome is characterised by colonic dilatation which if not diagnosed early and decompressed promptly risks perforation, peritonitis, and death, with a high mortality rate of up to 40%. (4, 5).

The true incidence of ACPO condition is unknown since the majority may not be diagnosed due to lack of suspicion and in some cases the bowel distention may resolve spontaneously or on conservative management.

One of the common predisposing factors is Caesarean delivery. The risk of bowel perforation in the early post-operative period is due to the relative paralysis which occurs and predisposes to the distention of the bowel. The possible etiological factors are; the decrease in the estrogen level post-partum, the decreased parasympathetic tone, and the preceding anesthesia especially spinal anaesthesia leading to the paralytic bowel symptoms. Our patient was delivered by Caesarean section and the mode of anaesthesia was general anaesthesia

The actual pathophysiology is not very clear but it is postulated that the loss of parasympathetic innervation function of the left colon might exist with the preservation of the right colon's innervations. This leads to inhibition of peristalsis in the left colon leading to a dysfunction between the two colon areas. This leads to the distention of the right colon with capillary circulation interruption. Resulting in necrosis and the end result is perforation. This commonly occurs in the caecum (6-8).

During the process of the bowel distention the critical outcome is the perforation of the caecum, the perforation results from the process of distention, resulting in increased tension on the colonic wall, and progressive distention leads to ischaemia, necrosis and perforation of the caecum. The risk of perforation is increased at the critical distention of the caecum between 9cm to 12cm. (3,10) and duration of distention of greater than six days.

Spontaneous perforation of the caecum is a potential fatal condition and therefore the most critical point is an early diagnosis and management, the management options are conservative and surgical depending on the diagnosis. In perforation then laparotomy is the standard management (9)

This is the first case of acute spontaneous perforation of the caecum after Caesarean delivery that has been reported in Kenya. Reports have been sporadic in literature with cases reported in Germany and other countries (3). As seen on our case presentation, ACPO is commonly found in patients who have undergone Caesarean delivery and post-delivery develop abdominal distention which may lead to the occurrence of the caecal dilatation. Progressive distention/ dilatation of the caecum may result in its perforation. This condition is certainly potentially fatal in 40% of cases where there is caecal

perforation as occurred in our patient (11). A high index of suspicion, prompt diagnosis and early management is required to achieve a good outcome.

It is the recommendation of the authors that patients undergoing Caesarean deliveries showed have per rectal laxatives within 12 to 24 hours to reduce the risks of colonic gaseous distention.

REFERENCE

1. Nanni G., *et al.* "Ogilvie's syndrome (acute colonic pseudo-obstruction): review of the literature (October 1948 to March 1980) and report of four additional cases. *Diseases of the Colon & Rectum* 25.2 (1982): 157-166.
2. Yang, B. and Ni, H.K. (2008) Diagnosis and Treatment of Spontaneous Colonic Perforation: Analysis of 10 Cases. *World Journal of Gastroenterology*, 14, 4569-4572. <http://dx.doi.org/10.3748/wjg.14.4569> (Paper reference:1)
3. Ni, H.-K. (2008) How to Diagnose and Treat Spontaneous Colonic Perforation? *Health & Medicine*. (Paper reference:1)
4. Alwan MH, van Rij AM. Acute colonic pseudo-obstruction. *Aust N Z J Surg*. 1998. 68(2):129-32. (Medline).
5. Ogilvie H. Large-intestine colic due to sympathetic deprivation; a new clinical syndrome. *Br Med J*. 1948 Oct 9. 2:671-3. (Medline).
6. Strecker JR, Jaluvka V, Spontaneous cecum perforation following cesarean section; *Geburtshilfe Frauenheilkd*. 1988;48:489-93
7. Roux M., *et al.* "Ogilvie's syndrome after cesarean section: A case report". *Gynécologie Obstétrique et Fertilité* 39.1 (2011): e15-e19. (Article in French).
8. Do YS, Myung SJ, Kwak SY, *et al.* Molecular and cellular characteristics of the colonic pseudo-obstruction in patients with intractable constipation. *J Neurogastroenterol Motil*. 2015 Oct 1. 21 (4):560-70. (Medline).
9. Ben Ameer H., *et al.* "Treatment of acute colonic pseudo-obstruction (Ogilvie's Syndrome). Systematic review". *La Tunisie Médicale* 91.10 (2013): 565-572. (Article in French).
10. Saunders MD. "Acute colonic pseudo-obstruction". *Best Practice & Research Clinical Gastroenterology* 21.4 (2007): 671-687.
11. Burt C, John G; Intestinal Pseudo-Obstruction; *Medscape* December 28, 2015.