SAJS

Case Report

Sigmoid volvulus in pregnancy

A. TOGO
M. TRAORÉ
Y. COULIBALY
B. SAMAKÉ
G. DIALLO
Gabriel Touré Hospital, Bamako, Mali

Summary

A 27-year-old woman, gravida 1, was seen at our surgical emergency department with abdominal pain at 25 weeks' gestation. She had pain, nausea and vomiting, a temperature of 37°C and a blood pressure of 100/70 mmHg. The cervix was closed, and an ultrasound scan showed a normal single fetus. A plain abdominal radiograph showed distension of the colon and a sigmoid volvulus. At emergency laparotomy, non-gangrenous sigmoid colon was resected with primary anastomosis. There were no complications, and 4 months later the patient delivered a healthy infant.

Early diagnosis of sigmoid volvulus in pregnancy and prompt intervention minimise maternal and fetal morbidity and mortality.

Sigmoid volvulus in pregnancy is rare and serious, with an incidence between 1/1 500 and 1/66 000 deliveries.[1] Choice of treatment depends on the duration of pregnancy, the state of the sigmoid colon, and resources available.[2] Early diagnosis and prompt intervention minimise maternal and fetal morbidity and mortality. We report on a case treated successfully in the Department of General Surgery at Gabriel Touré, a teaching hospital in Bamako, Mali.

A 27-year-old woman, gravida 1, was seen at 25 weeks' gestation complaining of pain, nausea, vomiting and no stool or flatus for the previous 48 hours. There was no vaginal discharge, and she had had no previous problems. She was not in shock, the abdomen was distended but there was no uterine contraction, the uterine height was 20 cm, and the cervix was closed. An ultrasound scan showed a normal single fetus. A plain abdominal radiograph showed a distended colon and sigmoid volvulus (Fig. 1). At emergency laparotomy, a non-gangrenous sigmoid was resected, with primary anastomosis (Fig. 2). The patient received salbutamol (1 mg/8 h) rectally over a 72-hour period. She made an uneventful recovery and was delivered of a healthy infant 4 months later.

Bowel obstruction in pregnancy is rare, most frequently being caused by sigmoid volvulus and adhesions. Only 76 cases of volvulus in pregnancy have been reported worldwide.[2] An increase in uterine volume is implicated in the formation of the volvulus.[3] Sigmoid volvulus is most frequent between 22 and 38 weeks' gestation.[2] The diagnosis is based on clinical and radiological signs. Unfortunately, standard radiography is often necessary for the diagnosis of volvulus. It involves a radiation dose of 0.001 Gy, and a dose of 0.01 Gy is dangerous, with a 1/1 000 risk of congenital malformation.[4]

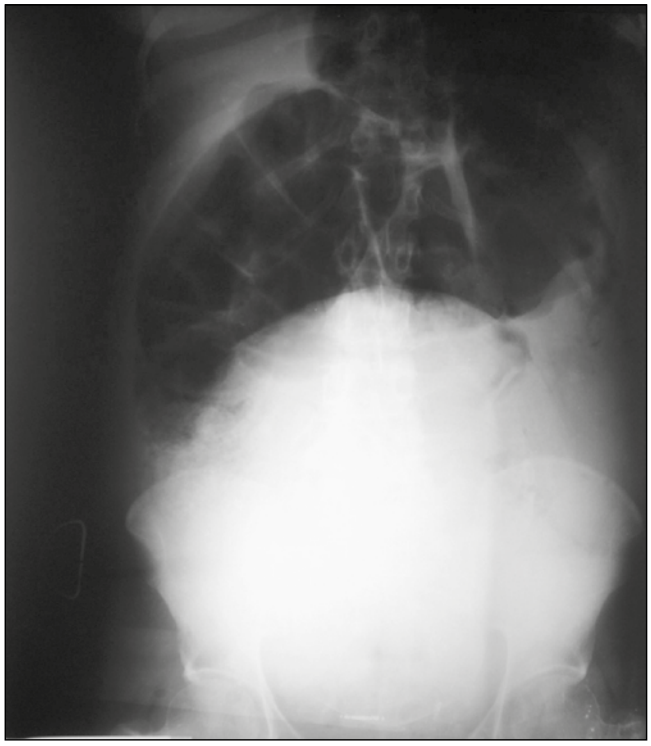

Fig. 1. Plain abdominal radiograph showing sigmoid volvulus in pregnancy.

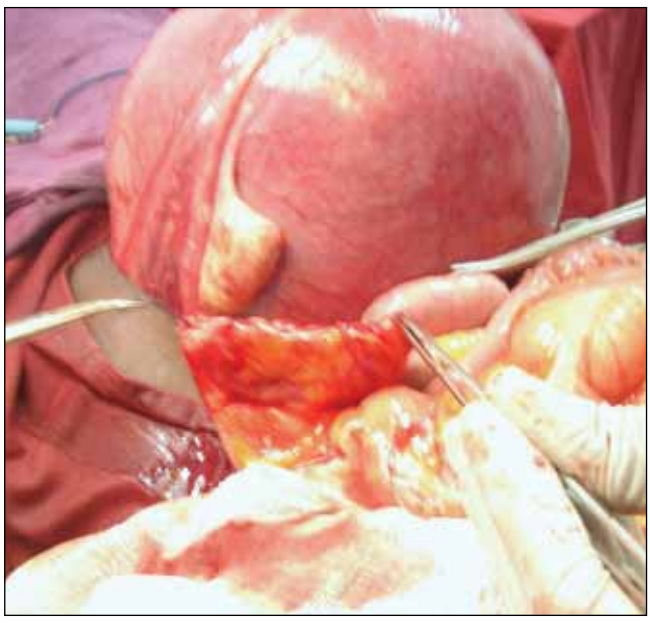

Fig. 2. Sigmoid volvulus in pregnancy – resection and anastomosis.

The aim of surgical treatment is to remove the obstruction without a risk of recurrence. In the absence of peritonitis and during the second trimester of gestation, Utpal and Kamal preferred detorsion by mini-laparotomy,[5] while Diallo *et al.* justified the choice of intestinal resection by elimination of the risk of recurrence and reduction of morbidity and mortality.[6] Given the impossibility of non-operative detorsion in Mali and the high risk of recurrence (13.5% in 30 days after intervention),[6] we carried out a sigmoidectomy with anastomosis. This approach has also been recommended in the second trimester of gestation by other authors.[4] The outcome was good for both mother and fetus. According to Twité *et al.*, bowel obstruction during the second trimester of pregnancy is associated with a 36% fetal mortality rate.[4]

REFERENCES

1. Connolly MM, Unti JA, Nora PF. Bowel obstruction in pregnancy. Surg Clin North Am 1995;75:101-113.
2. Chourak M, Beavogui L, Lachkar A, Elabsi M. Volvulus du sigmoïde nécrosé chez une femme enceinte. J Afr Hépato Gastroenterol 2009;3:35-37.
3. Ballantyne GH. Review of sigmoid volvulus: clinical patterns and pathogenis. Dis Colon Rectum 1982;25:494-501.
4. Twité N, Jacquet C, Hollemaert S, et al. Intestinal obstruction in pregnancy. Rev Med Brux 2006;27:104-109.
5. Utpal DE, Kamal DE. Sigmoid volvulus complicating pregnancy: case report. Indian J Med Sci 2005;59:317-319.
6. Diallo G, Diakité I, Kanté L, et al. Volvulus du colon sigmoide (VS) au centre hospitalier universitaire Gabrile Touré de Bamako. Médecine Afrique Noire 2009;56:377-381.

Book Review

Handbook of Trauma. 2nd ed. By Andrew Nicol and Elmin Steyn. Pp. xii + 514. Illustrated. R389.95. Oxford University Press Southern Africa, 2010. ISBN 9780-0-19-598747-8.

Trauma is an illness that affects our entire society. It places a burden on all levels of medical care, from the office health and safety officer, through the paramedic, nurse and doctor, all the way to government policymakers. For this reason, it places significant financial and emotional strain on healthcare systems. The South African experience of trauma is unique, as it combines the resource rich with the resource poor; huge distances with inaccessible areas; public awareness with a society that promotes risk-taking behaviour …

The *Handbook of Trauma* was first published in 2004 and set out to give South African health care practitioners a manual relevant to this unique situation, in which we are all too often lost. As we better understand the disease of trauma and best practice for care of these patients has changed, a revised second edition has been released (2010). Once again, experts in the field have contributed to give the most relevant information available. New chapters have been added to make the book even more comprehensive.

The book is divided into 6 parts, starting with a basic skeleton giving an approach to a general trauma patient. From here, it adds flesh to these bones and provides a basic theoretical understanding with a practical emphasis. Each chapter is rich in functional tips and pitfalls.

Part 1 takes the trauma patient from the road into the emergency area. Aspects of prehospital care and disaster management are explored before moving on to a structured resuscitation. Easy mnemonics are suggested so that a systematic approach may be employed. These include what to do when the patient deteriorates despite best efforts. Sensible use of investigations and pain control are discussed, giving practical applications for both (even when resources are limited).

Part 2 takes one through the secondary survey from head to toe, grading injuries and giving practical advice on how to treat them. The patient is taken from the emergency room to the operating theatre and on to the intensive care unit or ward. Management of sexual assault, which is often overlooked in the secondary survey, is also described. Specific cases are dealt with in parts 3 and 4. These cover the extremes of age, pressure, pregnancy, HIV, thermal trauma, high-energy injury and poisonous bites. All of these are common presentations of trauma patients that deserve special attention.

General ICU care for the trauma patient is covered in part 5. Among other aspects, prevention and management of common complications are dealt with. The often neglected area of psychological trauma is brought to the fore to remind the reader that injury affects the human being as a whole and is not just an illness. Part 6 gives academic input, describing trauma scores and systems as well as touching on the medico-legal side. Information on end-of-life decisions and organ donation according to South African law can be found in the final chapter.

Many South African medical students and housemen entering a casualty area for the first time are intimidated by the critical nature of trauma cases and the speed with which medical staff must act. This book fits easily into the pocket of a white coat and can explain situations faced by many for the first time.

The practice of trauma medicine cannot be demonstrated by a single book. South African health workers dealing with injured patients must be resourceful and deal with the situations in which they find themselves and their patients. The 2nd edition of Oxford University Press Southern Africa's *Handbook of Trauma* provides a solid grounding in the approach to trauma patients for all heath care practitioners who treat them. It is also an excellent reference for the student, intern, medical officer or registrar finding him- or herself in a position that requires a new tactic or better understanding. In short, this book is an essential weapon in the armamentarium of any South African doctor who deals with trauma, and no casualty department should be without one.

Daniel Surridge
Senior Surgical Registrar
University of the Witwatersrand