

Splenic flexure volvulus

V. Naraynsingh and G.C. Raju

Department of Surgery, General Hospital, Port of Spain, Trinidad, West Indies.

Summary: Splenic flexure volvulus is rare, only 22 cases having been reported. Though these usually present with chronic intermittent clinical features we recently encountered a case presenting as acute intestinal obstruction which, on plain abdominal X-rays, had classical features of this condition.

Introduction

Though volvulus of the colon is not uncommon, volvulus of the splenic flexure is extremely rare. Since the initial description of 2 cases in 1954 by Buenger, a total of 22 cases have been reported to date (Goldberg *et al.*, 1984). In only four of these cases however, did plain abdominal X-ray suggest the diagnosis; 15 others had the diagnosis established by barium enema. Recently, we encountered a case of acute intestinal obstruction which showed classical features of splenic flexure volvulus on plain abdominal X-ray.

Case report

A 33 year old deaf, mute, mentally retarded, cerebral palsy patient was admitted to hospital with a 2 day history of constipation and abdominal pain. Because of his mental state and inability to communicate, no history of previous episodes was available. On examination he was well hydrated, spastic in all four limbs, and the tense spastic abdominal musculature did not permit significant distension. No abdominal mass or tenderness was appreciated. The rectum was empty. Plain abdominal X-rays showed air-filled caecum and ascending colon with a sharp cut-off at the mid-transverse colon; immediately distal to this was a grossly distended loop of colon in the left upper abdomen with no air in the gut distally (Figure 1). With a diagnosis of acute colonic obstruction laparotomy was performed. The grossly distended loop was a volvulus of the splenic flexure of the colon which was still viable (Figure 2). The phrenocolic and splenocolic ligaments were absent while the gastrocolic ligament was attenuated and the greater omentum very poorly developed (Figure 2). The remaining gut was anatomically normal. The splenic

flexure was resected and end-to-end anastomosis performed. The patient recovered uneventfully and was discharged on the 14th post-operative day.



Figure 1 Supine plain X-ray of the abdomen showing air-filled caecum and ascending colon with abrupt cut-off at mid-transverse colon due to grossly distended loop of twisted splenic flexure.



Figure 2 Viable gut in splenic flexure volvulus with absent phrenicocolic and splenocolic ligaments and poorly developed greater omentum (arrow).

Discussion

Volvulus of the splenic flexure is rare because this part of the gut has limited mobility due to the phrenicocolic, gastrocolic and splenocolic ligaments and the retroperitoneal position of the descending colon. For splenic flexure volvulus to occur some, or all, of these anatomical factors must be either congenitally deficient or altered by surgery, thus rendering the flexure unusually mobile. Of the 22 reported cases, 16 patients (77%) had had previous abdominal surgery, 10 (45%) of whom had an upper abdominal operation. The presence of congenital bands (Young, 1955) or acquired adhesions (Buenger, 1954) have both been documented as aetiological factors.

In our patient there was no previous surgery but he had complete absence of the phrenicocolic and splenocolic ligaments with an attenuated gastrocolic ligament and poorly developed greater omentum.

The diagnosis is not usually suspected because of the rarity of this condition. Patients usually give a history of recurrent episodes of colicky abdominal pain with distension, constipation and vomiting, while less frequently they present with acute intestinal obstruction. Because chronic recurrent volvulus is the usual

presenting feature most patients (68%) have had the diagnosis established by barium enema. Reduction of the volvulus may occur during barium enema (Buenger, 1954; Wray & Wangenstein, 1971; Lantieri *et al.*, 1979) or spontaneously (Wolf & Guglielmo, 1956). Plain X-rays are less frequently diagnostic. As well demonstrated in our case, these show obstruction at the mid-transverse colon with a grossly dilated splenic flexure loop and no air in the distal colon; these classical features are only likely to be seen in the acutely obstructed volvulus.

Because of its rarity no specific treatment of choice has been established. Primary resection with colostomy or end-to-end anastomosis will certainly cure the problem and prevent recurrence. However, in the absence of gut gangrene, lesser procedures such as detorsion, adhesiolysis and fixation of the splenic flexure have been employed with success (Goldberg *et al.*, 1984; Lantieri *et al.*, 1979). These lesser procedures may be acceptable as the treatment of choice since they cause minimal morbidity and, so far, no recurrences have been reported following surgery.

References

- BUENGER, R.E. (1954). Volvulus of the splenic flexure of the colon. *American Journal of Roentgenology, Radium Therapy and Nuclear Medicine*, **71**, 81.
- GOLDBERG, M., LERNAU, O.Z., MOGLE, P., DERMER, R. & NISSAN, S. (1984). Volvulus of the splenic flexure of the colon. *American Journal of Gastroenterology*, **79**, 693.
- LANTIERI, R., TEPLICK, S.K. & LABELL, M.J. (1979). Splenic flexure volvulus: two case reports and review. *American Journal of Radiology*, **132**, 463.
- WOLF, B.S. & GUGLIELMO, J. (1956). Case of volvulus of the splenic flexure. *Journal of the Mount Sinai Hospital, New York*, **23**, 741.
- WRAY, R.C. Jr. & WANGENSTEEN, S.L. (1971). Volvulus of the splenic flexure and cecum. *Surgery*, **27**, 351.
- YOUNG, M.P. (1955). Coexistent volvulus of the splenic flexure and cecum. *Surgery*, **37**, 983.