Caecal volvulus with intestinal malrotation: need for caecopexy?

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DESCRIPTION

Caecal volvulus accounts for 30% of all colonic volvulus.¹ It occurs due to torsion or hyperflexion of an enlarged, poorly fixed hypermobile caecum. It manifests in two forms: axial rotation of the caecum and the ileum around the mesentery and the less common caecal bascule, where the bowel folds up on itself.² Intestinal malrotation occurs due to incomplete or faulty rotation and fixation of the gut during the 5th to 11th week of fetal life. A combination of both is rare.

A 10-year-old boy presented with the complaints of right lower quadrant pain, bilious vomiting and non-passage of stools since 2 days. On examination, the child was dehydrated, had tachycardia, had low-volume pulse, had blood pressure of 86/60 mm Hg and had a grossly distended abdomen with no well-defined lump or signs of peritonism. His per rectal examination revealed an empty collapsed rectum. X-ray abdomen was suggestive of intestinal obstruction with multiple air-fluid levels. Child was started with supportive management, oxygen by mask, intravenous fluids, antibiotics, nasogastric decompression and catheterisation. However, the child failed to respond after 24 hours of conservative management. A contrast-enhanced CT scan revealed caecal

volvulus with intestinal malrotation (duodenojejunal (DJ) flexure was positioned at the subpyloric level and to the right of the midline) (figure 1).

On exploration, a hugely distended (approximately 15 cm diameter) caecal volvulus was seen which was delivered out with difficulty (figure 2). Clockwise de-rotation of volvulus, caecal plication for a length of 18 cm to decrease the lumen by about 50%, was done. Ladd's bands across the DJ flexure and till the ileocaecal junction were released to straighten the loop of duodenum; widening of the base of mesentery and appendectomy were done. The loops were repositioned into the abdomen; the small intestine in the right side of the abdomen and the large intestine towards the left with the caecum repositioned in the left lower quadrant.

The child had an uneventful recovery and was started orals on the 5th postoperative day and was discharged on the 10th day. The child was last followed-up till 5 years after the surgery, has gained weight adequately and has not had any recurrence of symptoms.

The usual surgical treatment options for uncomplicated caecal volvulus are manual detorsion, caecopexy, caecostomy and colectomy by open or laparoscopic approaches.¹ Ileocolic resection without detorsion (eventually with pexy of the

A

B

Figure 1 (A) X-ray abdomen (erect) showing a prominent dilated intestinal loop in the right lower quadrant. (B) Contrast-enhanced CT coronal section suggestive of caecal volvulus with the duodenojejunal flexure towards the right of midline suggestive of malrotation.

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Figure 2 Huge dilated caecal volvulus segment.

remnant colon) is the standard treatment and has a low rate of mortality and 0% recurrence.¹ In case of perforation or gangrene of the volvulus segment, a resection and anastomosis or a colostomy may be mandatory. Ours was an unusual case of caecal volvulus associated with malrotation. Similar case has been reported in a 23-year-old man presenting with obstruction post renal lithotripsy; detorsion and retroperitonealisation with caecopexy was performed.³

Learning points

- ▶ In an uncomplicated case of caecal volvulus, de-twisting with caecostomy or caecopexy is usually considered as the treatment of choice.
- ▶ In rare instances, if caecal volvulus is associated with malrotation, de-twisting of caecal volvulus with caecal repositioning and malrotation correction may resolve symptoms.

In this rare case of caecal volvulus associated with malrotation, only detorsion, caecal plication and repositioning, resolved the condition.

Contributors The case described had been operated under the care of DKY and was managed by DKY and AUS. The manuscript writing and revision was done by KK and VJ.

Competing interests None declared.

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