Delayed Complete Colonic Stricture after Posterior Sagittal Anorectoplasty: Iatrogenic or Inflammatory?

Dear Sir,

Anorectal malformations (ARMs) are common congenital anomalies with the incidence of 1:5000 live births.[1] Colonic stenosis can be congenital or acquired. Congenital colonic stenosis is a type of colonic atresia. It is very rare in children and only 16 cases have been reported till date.[2] Acquired colonic atresia may be due to inflammatory or iatrogenic.[3] We wish to present a case of colonic stricture, which was diagnosed after stoma closure during post-operative period in a case of ARM.

Case Summary

A 2-year-old male child was admitted to our paediatric surgery department for loop sigmoid colostomy closure. He had ARM and loop sigmoid colostomy was done on day 3 of life at other government hospitals. After that, the child was on regular follow-up at our outpatient department. During follow-up, the patient was advised to have an ultrasound kidney, ureter and bladder (KUB), two-dimensional (2D) echo, pressure augmented distal colostogram and planned for posterior sagittal anorectoplasty (PSARP). Ultrasonography KUB and 2D echo reports were normal.

Pressure augmented distal colostogram was suggestive of blind-ending dilated distal rectal pouch with faecaloma, no evidence of recto urethral fistula and colonic stenosis [Figure 1]. We taught and advised parents about distal bowel mechanical cleaning with saline. We did PSARP at 1 year of age and kept the patient on neoanus dilatation. Now, we planned patient for stoma closure. After stoma closure, the child developed abdominal distention with bilious vomiting and passed mucoid jelly through neoanus. Post-operative, an X-ray abdomen suggested multiple air-fluid levels. In view of deteriorating clinical conditions, we planned for re-exploration. Intraoperative findings were dilated small and large bowels. Colonic anastomotic site leak was present with minimal localised faecal contamination. We found unusual findings that colonic dilatation was present beyond the anastomosis with abrupt narrowing of the distal sigmoid colon [Figure 2a]. We dismantled the anastomosis and laid open the distal colon up to a narrow zone. There was a stricture of length approximately 2 cm with scared fibrotic mucosa [Figure 2b]. In view of the small colonic anastomotic leak with minimal localised faecal contamination, a strictured part of the sigmoid colon was excised and bowel continuity was established. Thereafter, he developed features of sepsis that were managed conservatively by upgradation of intravenous antibiotics, inotropes support and mechanical ventilation. Despite all the conservative management, he could not be saved and died on the post-operative day 3.

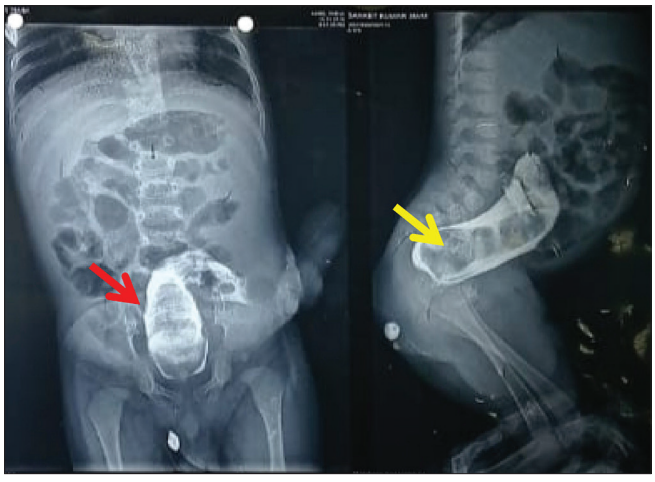


Figure 1: Pressure augmented distal colostogram showing a distal rectal pouch (red arrow) and large faecaloma (yellow arrow)

Discussion

Three-stage anorectoplasty are standard practice in the case of ARM. Pressure-augmented distal colostogram is the key diagnostic study before PSARP for proper evaluation of the distal colon.[4]

In our patient, distal colostogram suggested that blind-ending rectal pouch with no evidence of colonic stricture. In our index case, colonic stricture may be due to inflammatory or iatrogenic injury to bowel mucosa due to distal bowel mechanical cleaning. We overlooked the possibility of delayed colonic stricture and landed up in devastating complications post-stoma closure. The current case report emphasizes the

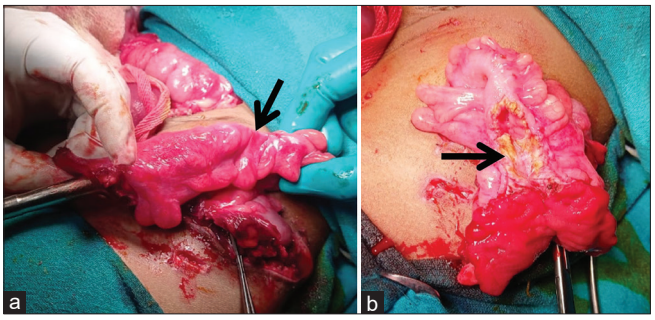


Figure 2: (a) Intraoperative picture showing abrupt narrowing of the distal sigmoid colon (black arrow) and (b) showing scared fibrotic mucosa (black arrow)

importance of an awareness of delayed colonic stricture, which may occur after PSARP.

To conclude, we should repeat the distal colostogram in pre-operative period or to check distal bowel patency intraoperatively before stoma closure to reduce morbidity and mortality of the patient.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the legal guardian has given his consent for images and other clinical information to be reported in the journal. The guardian understands that names and initials will not be published and due efforts will be made to conceal patient identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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