

Comments on ‘Ileosigmoid knotting – the Parirenyatwa Hospital experience’

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I read with interest the paper titled ‘Ileosigmoid knotting: the Parirenyatwa Hospital experience’ written by Mbanje et al.,¹ who presented a retrospective analysis of 24 cases with ileosigmoid knotting (ISK). ISK, the wrapping of ileum or sigmoid colon around the other stricture, is a very rare entity worldwide with a few hundred cases reported to date.² However, it is relatively common in our practising area, eastern Anatolia. We have 80 cases with ISK over a 54.5-year period from June 1966 to January 2021, which is one of the largest single-centre ISK series in the world.³ Here, I would like to discuss some details of ISK with regard to the cases presented by the authors.

Firstly, although an enlarged uterus is known as a predisposing factor in the development of ISK, pregnancy complicating ISK is a very rare entity, and up to date less than 20 cases have been reported in the literature.² For this reason, two pregnant cases presented by the authors are extremely interesting. In our series, there were three pregnant patients (13.6%) among 22 women. Interestingly, the preoperative diagnosis of our cases was not ISK, as was demonstrated by the authors. In my experience, abdominal pain, nausea, and vomiting, which are physiologic findings in pregnancy, cloud the clinical picture. Additionally, although an abdominal radiograph may be used, most practitioners avoid X-ray studies because of the radiation risk to the foetus which impedes making an accurate diagnosis. To obtain an early and correct diagnosis, if possible, I suggest using magnetic resonance imaging in such patients.

Secondly, although an abdominal radiograph suggests the diagnosis by demonstrating dilated sigmoid colon segments forming a coffee bean sign, in addition to multiple intestinal air-fluid levels, the condition is often misdiagnosed as sigmoid volvulus or non-specific intestinal obstruction, as described in the authors’ series. In contrast, computed tomography (CT) is highly diagnostic by showing a mesenteric whirl sign in addition to the dilated sigmoid loops,⁴ which was unfortunately not available in the authors’ emergency setting. In my experience, following the usage of CT from the 2000s, the preoperative diagnostic accuracy rate of ISK has increased from 15–20% to 90%.

Thirdly, following the resection of gangrenous sigmoid colon, a stoma is traditionally fashioned to avoid the risk of intestinal leakage from a primary anastomosis, as was preferred by the authors. Nevertheless, a tension-free primary anastomosis may be used in selected nonelderly and well-conditioned patients with acceptable mortality

and morbidity rates.⁵ In my experience, most of the patients younger than 70–75 years old and those with American Society of Anaesthesiologists (ASA) classes ≤ 3 are potential candidates for primary anastomosis of both ileum and sigmoid colon.⁶

Finally, regarding the mortality rate of the authors’ series, a 4.8% mortality rate is an excellent result, particularly in patients with both ileum and sigmoid colon gangrene. In our series, overall mortality rate was 18.8%, while it was 28.3% in cases with double-segment gangrene. Despite advanced diagnostic modalities, surgical materials and intensive care units, ISK has a mortality rate as high as 50% in patients with one-segment gangrene and 60% in patients with double-segment gangrene.

I congratulate the authors on their commendable results and look forward to their reply on my comments.

Conflict of interest

The author declares no conflict of interest.

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Response to comment on “Ileosigmoid knotting – The Parirenyatwa Hospital experience”

Thank you for the positive feedback regarding our article.

As you have rightly pointed out, the availability of CT (or MRI imaging in pregnancy) greatly improves preoperative diagnostic precision and would potentially mitigate against treatment delays relating to diagnostic uncertainty. However, both these modalities were unavailable in our resource-limited setting.

Primary anastomosis after resection of the bowel in ileosigmoid knotting has been performed with variable outcomes related to the presence or absence, as well as the extent of gangrene.^{1,2} While successful combined ileal and colonic primary anastomosis may avoid the morbidity of an ileostomy/colostomy and a secondary operation, failure of the anastomoses in these critically ill patients may lead to disastrous outcomes.

Our favourable mortality rate in comparison with available literature may be related to a selection bias. Our series

had patients with a much shorter duration of symptoms prior to definitive surgery (median 27.2 hours) compared to Atamanalp (mean 46.5 hours) as well as a younger population (median 37 years vs mean 46.7 years).³ Our series demonstrated that time to surgery may have a significant bearing on patient outcome.

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