Surgically inverting an incidentally detected Meckel’s diverticulum – Wrong method

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ABSTRACT

INTRODUCTION: Intussusception leading to intestinal obstruction is a known complication of Meckel’s diverticulum. Inverting of Meckel’s acts as a lead point for intussusception. Causes of inversion are many but surgical inversion leading to intussusception is extremely rare.

PRESENTATION OF CASE: We hereby report a case of a 14 year adolescent boy operated previously for open appendicetomy presenting to us with intestinal obstruction who on exploration was found to have an surgically inverted Meckel’s diverticulum acting as a lead point for ileo-colic intussusception.

DISCUSSION: To the best of our knowledge, surgically inverting any Meckel’s diverticulum is never a treatment option even when the diverticulum is incidentally detected. Diverticulectomy or segmental resection is the procedure of choice for Meckel’s diverticulum.

CONCLUSION: Meckel’s diverticulum should never be inverted surgically. Not only it is a wrong method but also increases the risk of complications.

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1. Introduction

Meckel’s diverticulum accounts for 90% of all omphalomesenteric (vitelline) duct anomalies and is the most common congenital abnormality of the gastrointestinal tract. It is reported to occur in 1–3% of the general population and autopsy series.1,2 However, the lifetime risk of developing complications in patients with Meckel’s diverticulum is believed to be less than 5%.3 These complications included intestinal obstruction, intussusception, inflammation, perforation and bleeding.

Infrequently, Meckel’s diverticulum can invert and invaginate into the ileal lumen and can be the leading point of the intussusception (Figs. 1 and 2).

The incidence of intussusception attributed to an inversion of Meckel’s diverticulum accounts for 4% of all cases presenting with intestinal obstruction due to intussusception.4 It occurs when the Meckel’s diverticulum sags into the bowel lumen and then serves as a lead point to allow telescoping of the small intestine, first into the distal ileum and then into the large intestine, causing ileo-ileal and ileo-colic type of intussusceptions.

We hereby report a case where surgical inversion was done as a treatment for Meckel’s diverticulum which lead to intussusception and intestinal obstruction.

2. Case report

A 14-year-old boy presented with colicky abdominal pain and distention of abdomen with bilious vomiting. He had undergone open appendicetomy through McBurney’s incision 5 days back at a peripheral rural setup.

On presentation he had tachycardia and fever. Abdomen was distended and tenderness was present all over. Bowel movements were hyper peristaltic and per rectal ballooning was present.

Erect abdominal X-ray showed dilated small bowel loops with multiple air fluid levels. Ultrasonography of abdomen showed multiple fluid filled dilated small bowel loops suggestive of small bowel obstruction. His hematological investigations were within normal limits.

Naso-gastric decompression was done and he was started on IV fluids, anti-spasmodics and antibiotics. He was explored in view of presence of persistent signs of small bowel obstruction.
4. Conclusion

Thus we conclude, there is no role for surgical inversion of Meckel’s diverticulum even in patients with incidentally detected Meckel’s diverticulum.

Conflict of interest

None.

Funding

Nil.

Ethical approval

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.
Key learning points

- Surgically inverting Meckel's diverticulum is not a treatment option.
- Instead of curing it predisposes to further complications.

References

1. Soderlund S, et al. Meckel's diverticulum. A clinical and histologic study. Acta Chir Scand Suppl 1959;248:1–233. PMID: 13832430.
2. Yahouchy EK, Marano AF, Etienne JC, Fingerhut AL. Meckel's diverticulum. J Am Coll Surg 2001;192(5):658–62. PMID: 11333103.
3. Soltero MJ, Bill AH. The natural history of Meckel's diverticulum and its relation to incidental removal. Am J Surg 1976;32:168–73.
4. Mahdi B, et al. Intussusception caused by an inverted Meckel's diverticulum: a rare cause of small bowel obstruction in adults. Pan Afr Med J 2011;10:57. PMCID: 3290887.
5. Marinis A, Yiallourou A, Samanides L, Dafnios N. Intussusception of the bowel in adults: a review. World J Gastroenterol 2009;15:407–11. PMCID: PMC2653360.
6. Weilbaecher D, Bolin JA, Hearn D, Ogden W. Intussusception in adults. Review of 160 cases. Am J Surg 1971;121:531–5. PMID: 5557762.
7. Felix EL, Cohen MH, Bernstein AD, Schwartz JH. Adult intussusception: case report of recurrent intussusception and review of the literature. Am J Surg 1976;131:758–61. PMID: 937658.
8. Nagorney DM, Sarr MG, McFerrath DC. Surgical management of intussusception in the adult. Ann Surg 1981;193(2):210–6. PMID: 7469558.
9. Martin-Lorenzo JC, Torralba-Martinez A, Lirón-Ruiz R, Flores-Pastor B, Miguel-Pereiro J, Aguilar-Jimenez J, Aguayo-Albasini JL. Intestinal invagination in adults: preoperative diagnosis and management. Int J Colorectal Dis 2004;19:68–72. PMID: 12838363.
10. Karahasanoglu T, Memisoglu K, Korman U, Tunckale A, Curgunlu A, Karter Y. Adult intussusception due to inverted Meckel's diverticulum: laparoscopic approach. Surg Laparosc Endosc Percutanous Tech 2003;13:39–41. PMID: 12598757.
11. El-Dhuwaib Y, O'Shea S, Ammori BJ. Laparoscopic reduction of an ileoileal intussusception and resection of an inverted Meckel's diverticulum in an adult. Surg Endosc 2003;17:1157. PMID: 12728389.
12. Karaman A, Karaman I, Hakan Y, Mustafa KA, et al. Management of asymptomatic or incidental Meckel's diverticulum. Indian Pediatr 2010;47(12):1055–7.

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