

Stitch erosion of small bowel: a rare delayed and avoidable complication of laparotomy

Malith Nandasena¹, Sahan Perera¹, Aloka Pathirana¹, Chinthaka Wijesurendere²

¹University of Sri Jayewardenapura, Sri Lanka

²Base Hospital Warakapola, Sri Lanka

Key words: Past laparotomy; abdominal wall closure; small bowel fistula; stitch erosion; non-absorbable sutures

Introduction

Incorporation of a loop of bowel to a stitch is a devastating complication that could occur during abdominal wall closure. This is a condition that usually presents in the early post-operative period as an abdominal wall abscess or enterocutaneous fistula with varying degrees of sepsis.

A mass related to the surgical site with evidence of inflammation that is actually due to stitch erosion of small bowel from an operation performed three decades ago is a phenomenon that is not reported in literature according to the author's knowledge. However, delayed erosion of bowel caused by prosthetic mesh is a recognized entity that is reported in the literature (1)

Case presentation

We report a case of 73 years old female presenting with a painful mass around the umbilicus for 3 months duration, which was initially diagnosed as an incisional hernia ultrasonically. She gives a history of trans-abdominal hysterectomy and bilateral salphingo-oophorectomy for a benign fibroid disease through a midline laparotomy. Following that she had an uneventful recovery with no surgical site infection. The mass which developed around umbilicus almost 3 decades later, was gradually progressive with signs of inflammation.

Contrast enhanced CT abdomen showed an abscess in the subcutaneous tissues of the anterior abdominal wall communicating with a loop of the small bowel.

Elective exploratory laparotomy revealed an abdominal wall abscess with densely adhered small bowel to the previous scar and fistulation with abscess cavity. [Figure 2] Abscess was drained and the fistulated small bowel segment was completely excised with an end to end anastomosis of healthy

small bowel ends. As the rectus sheath edges were healthy primary abdominal closure was done with a polydioxanone suture. The skin was loosely approximated over a corrugated rubber drain. She had an uneventful post-operative period with no surgical site infection.

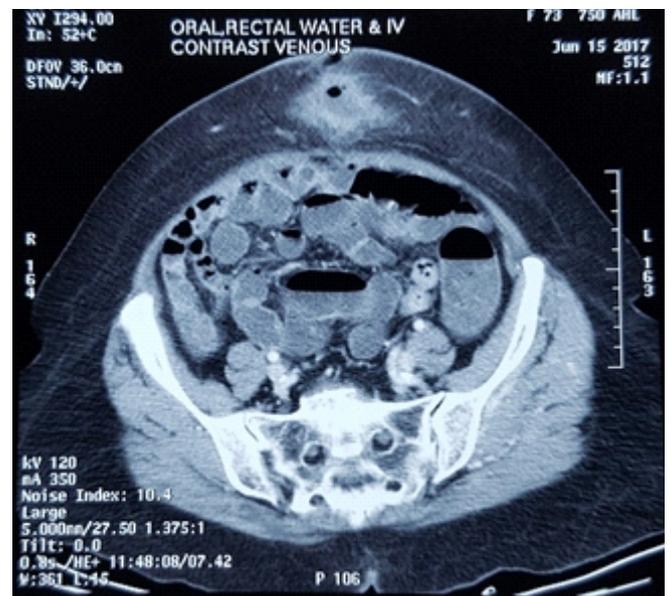


Figure 1. CECT abdomen showing an abscess in the subcutaneous tissues of the anterior abdominal wall communicating with a loop of small bowel (arrow).

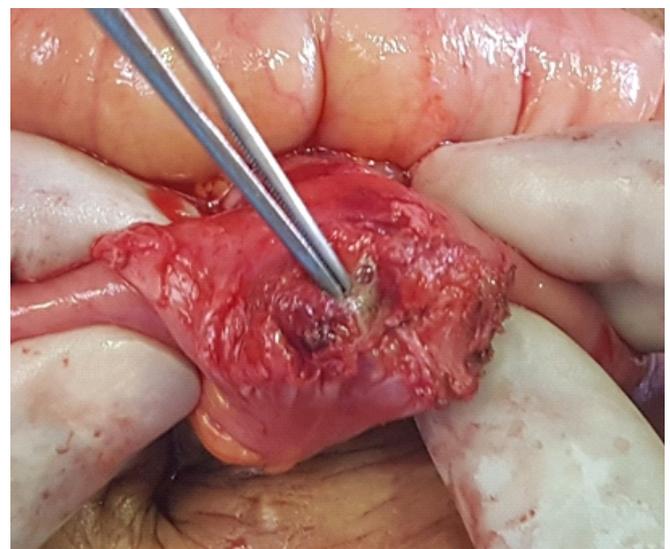


Figure 2. Densely adhered small bowel to the previous scar and fistulation (forceps)

Correspondence: Sahan Lawrance Perera

E-mail: sahan_doc@yahoo.com

Received: 05-03-2019 Accepted: 20-04-2019

 <https://orcid.org/0000-0003-3973-1292>

DOI: <http://doi.org/10.4038/sljs.v37i1.8604>



Histology of the small bowel segment showed chronic nonspecific inflammation only.

Discussion

Although at presentation our patient's problem was clinically suspected as an incisional hernia, the use of cross sectional imaging in the workup highlights its value in picking up an unexpected significant finding. This helped in the delineation of its anatomy for accurate surgical planning. An unplanned exploration in our patient would have led to the formation of an enterocutaneous fistula leading to more than a single operation to solve the problem.

As the histology of the excised segment of bowel showed non-specific inflammation only, conditions such as Cohn's disease of the small bowel can be ruled out. It is, therefore, most likely caused by stitch erosion of small bowel leading to a concealed collection; an enterocutaneous fistula in evolution. The question here is why was it silent for thirty years? Did the injury take place three decades ago? The most probable explanation is that the non-absorbable stitch acting as a foreign body eroded through the bowel wall three decades after the initial operation as a result of being in very close proximity to the bowel. There was no other local or systemic evidence of sepsis as it was well concealed.

This case highlights the value of the use of long term absorbable sutures rather than non-absorbable sutures in the closure of abdominal wall defects as recommended by European Hernia Society guidelines, 2015 in abdominal wall closure(2). On a different note, during abdominal wall closure, placement of omentum as a barrier between the abdominal wall and bowel is of potential use in preventing adhesions forming between the scar and bowel.

All authors disclose no conflict of interest. The study was conducted in accordance with the ethical standards of the relevant institutional or national ethics committee and the Helsinki Declaration of 1975, as revised in 2000.

References

1. Thirumalagiri V, Hemachandra T, Polisetti R, Satwalekar R. Late ileocutaneous fistula due to onlay mesh fixation after incisional hernia repair. *J Dr NTR Univ Heal Sci* [Internet]. 2014 [cited 2017 Jul 3];3(2):107. Available from: <http://www.jdrntruhs.org/text.asp?2014/3/2/107/134851>
2. Muysoms FE, Antoniou SA, Bury K, Campanelli G, Conze J, Cuccurullo D, et al. European Hernia Society guidelines on the closure of abdominal wall incisions. *Hernia* [Internet]. 2015 Feb 25 [cited 2017 May 4];19(1):1–24. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25618025>

Learning Points:

- Incorporation of a loop of bowel to a stitch during abdominal wall closure is a devastating complication that usually presents in the early post-operative period as an abdominal wall abscess or enterocutaneous fistula. However, it is important to remember that a stitch erosion of small bowel following open surgery can present even many decades later as a painful mass.
- This study highlights the value of using long term absorbable sutures rather than non-absorbable sutures in the closure of abdominal wall defects.