SAS Journal of Surgery
Abbreviated Key Title: SAS J Surg
ISSN 2454-5104
Journal homepage: https://www.saspublishers.com

OPEN ACCESS

General Surgery

Multiple Small Bowel Fistulae Secondary to Mesh Erosion: A Rare Presentation

Nidhi Gupta[1*], Amit Jain[1], Parshant Grover[1]

[1]Department of General Surgery, Sawai Man Singh Medical College, Rajasthan, India

DOI: 10.36347/sasjs.2022.v08i12.015 | **Received:** 08.10.2022 | **Accepted:** 14.11.2022 | **Published:** 28.12.2022

***Corresponding author:** Nidhi Gupta
Department of General Surgery, Sawai Man Singh Medical College, Rajasthan, India

Abstract | **Case Report**

Synthetic mesh placement has proved to be a boon for repairing different types of hernias and also vaginal vault prolapsed. However as with all procedures, there are certain risks involved. Mesh migration and erosion in bowel is a rarely reported complication of using synthetic mesh. We report an elderly sixty two year old woman presented with abdominal pain and incisional hernia after being previously operated for abdominal hysterectomy and mesh sarcocolopexy for subsequent vault prolapse ten months ago. Patient planned for open mesh hernioplasty but was intra operatively found to have multiple ileal fistulae secondary to mesh erosion. It is important to consider the possibility of mesh erosion or migration in all patients who present with post synthetic mesh procedures- rare as the incidence may be. Use of specific mesh and suture materials is as important as technique in the primary surgery to prevent such a complication in the first place.

Keywords: Synthetic mesh, hernias, Small bowel fistulae, hysterectomy.

INTRODUCTION

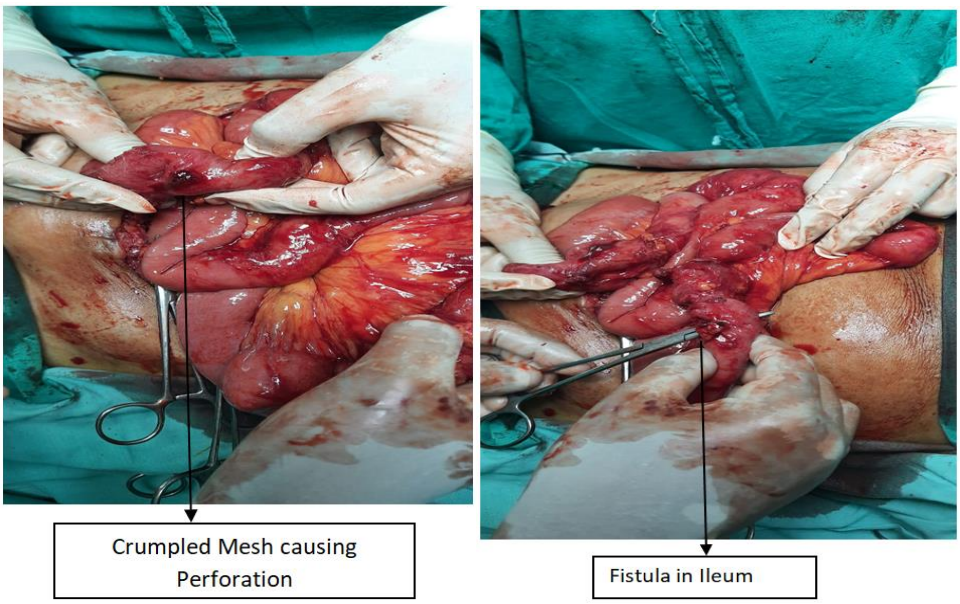
Small bowel fistulae secondary to mesh erosion is a rare entity and seldom suspected in patients. It is difficult to detect on radiological studies as well, hence is a challenging diagnosis and often discovered intra operatively. Most such cases present with infection and abscess formation but such was not the case in our patient. Increased awareness regarding the same would result in better pre-operative preparedness as well as serve to reduce its incidence by taking appropriate measures in the primary surgery.

CASE

A previously asymptomatic 62 year old woman presented with pain abdomen and swelling at previously operated surgical scar site. This patient underwent total abdominal hysterectomy fourteen years ago followed by a repeat surgery for vault prolapse ten months ago, in which a mesh sling sarcocolopexy was done.

On clinical examination a 15x20 cm well defined swelling was palpable over the site of lower abdominal incision, doughy in consistency, non-tender, non-erythematous and cough impulse was present. An ensuing contrast enhanced computed tomography scan revealed an anterior abdominal defect of 230 mm size in the infraumbilical region at operative site suggestive of incisional hernia.

All routine blood investigations were normal and the patient did not have any obstructive features such as constipation or vomiting. The patient was consequently planned for an open mesh hernioplasty procedure.



Intra operatively, multiple swiss hole cheese defects were found along the line of closure of previous surgery. Hernial sac was opened and ileal loops found to be herniating. However on further examination multiple fistulae were observed in a three feet segment of the terminal ileum, two feet proximal to the ileo-caecal junction. Prolene mesh placed in the previous surgery for vault suspension was found crumpled in multiple locations along the length of the ileum causing multiple perforations. The entire involved segment was resected and primary anastomosis of the remaining ends was done using PDS 2'o suture material. Hemostasis was achieved and abdomen closed in layers. Post-operative monitoring in ward was uneventful and patient was stable on discharge.

DISCUSSION

Mesh erosion into visceral organs is an extremely rare complication of mesh procedures – which most commonly include repair of inguinal hernias, with only 15 such cases being reported in literature [1]. Most cases involve the urinary bladder [2] and small bowel involvement following sarcocolopexy, as seen in our patient, is unusual. Most such cases develop subsequent infection of migrated mesh and abscess formation which can be appreciated on a CT scan [1] and is associated with complaints of discharge and pain – which should actively be looked for during follow up. Possible etiology for this include improper and incomplete fixation of the mesh to the surrounding fascia or the use subpar suture material – higher rates of erosion observed with the use of non-absorbable suture material as compared to absorbable [5]. The use of a composite mesh with an absorbable layer has been introduced as a replacement for polypropylene only meshes citing the same [3]. Pressure effects also result in erosion and subsequent perforation or fistulae formation. Risk factors include older age, diabetes mellitus, smoking (6).

Our patient presented with irregular non-specific abdominal pain which was attributed to incisional hernia. Furthermore radiological imaging did not point towards any possible mesh erosion. After intra operative discovery, retrospectively the risk factor of old age and use of prolene mesh in previous surgery were enunciated, which could have pointed the surgeon to the possibility of this differential diagnosis. The patient is now asymptomatic at two months of follow up period.

These cases mostly require surgical intervention and resection of the affected segment- with no role for conservative management [4]. It is imperative for the surgeon to bear in mind the possibility of such a rare complication in all patients with history of synthetic mesh procedures.

CONCLUSION

Patients must be informed regarding possibility of subsequent procedures for such complications before the primary surgery as mesh migration has been documented to occur as much as 16 years after the primary surgery [1].

Surgeons should also be aware of the higher possibility of mesh erosion and migration directly related with the use of non-absorbable sutures and mesh. The same should be actively discontinued and discouraged in every mesh procedure.

ACKNOWLEDGEMENTS

The authors thank the Department of Radio Diagnosis for providing CT scan report and all the colleagues who were involved in the patient care.

CONTRIBUTORS

SJ and NG wrote the draft of the manuscript. AJ was the operating surgeon and provided clinical

pictures. All authors contributed to the literature review and approved the final manuscript for submission.

FUNDING

The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

COMPETING INTERESTS

None declared.

Patient Consent: Obtained.

Provenance and Peer Review: Not commissioned; externally peer reviewed.

REFERENCES

1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4746983/#:~:text=It%20involves%20placement%20of%20mesh,literature%20following%20laparoscopic%20mesh%20hernioplasty
2. https://journals.lww.com/cmj/FullText/2017/05050/Mesh_Erosion_into_Sigmoid_Colon_after_Inguinal.22.aspx
3. https://jmedicalcasereports.biomedcentral.com/articles/10.1186/s13256-020-02540-4
4. https://pubmed.ncbi.nlm.nih.gov/28087481/
5. https://pubmed.ncbi.nlm.nih.gov/31569096/
6. https://pubmed.ncbi.nlm.nih.gov/24793930/#:~:text=Older%20age%2C%20diabetes%20mellitus%2C%20smoking,the%20risk%20of%20mesh%20erosion.