



ISSN: 2230-9926

Available online at <http://www.journalijdr.com>

IJDR

International Journal of Development Research

Vol. 14, Issue, 03, pp. 65081-65083, March, 2024

<https://doi.org/10.37118/ijdr.27852.03.2024>



RESEARCH ARTICLE

OPEN ACCESS

OBSERVATION OF IPOM MESH FOUR MONTHS POST-INSERTION: A CASE STUDY ON ABDOMINAL WALL ABSCESS AND MULTIPLE FISTULAS FOLLOWING LAPAROSCOPIC IPOM PROCEDURE

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ARTICLE INFO

Article History:

Received 14th January, 2024

Received in revised form

28th January, 2024

Accepted 17th February, 2024

Published online 27th March, 2024

Key Words:

Ipom, Abdominal Wall Abscess, Fistula, Mesh.

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ABSTRACT

First described in 1993, the laparoscopic intraperitoneal onlay mesh (ipom) gained popularity with main advantage of reduced wound complications & recurrence rates.¹We went across available literature when this case of multiple fistulas in the abdominal wall came to us after 6 months of IPOM, not a single case report or complication describing it was available. The patient was operated with IPOM for umbilical hernia 6 months ago and now presented with abdominal wall abscess with multiple fistulas after IPOM. This case report shed light on management of one & only reported case of such.

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Citation: Dr. Arjun Chinnappa, Dr. Chandana Narayanaswamy and Dr. Linganaouda Patil, 2024. "Observation of ipom mesh four months post-insertion: a case study on abdominal wall abscess and multiple fistulas following laparoscopic ipom procedure". International Journal of Development Research, 14, (03), 65081-65083.

INTRODUCTION

The main advantage of the laparoscopic technique over conventional methods is that it involves an extremely low risk of mesh infection. Up to now, no mesh-related complications in the form of fistula or mesh migration have been described.² The patient is a 60 year old male with no co morbidities. He underwent laparoscopic IPOM with PRO VISC 3D- Dual side mesh (Composite multifilament Polyester mesh) fixed with transfascial sutures & tackers, for Umbilical hernia in May 2022 (Fig.1) He Presented to us again in Dec 2022 with pus discharge from four sites (sites of Transfascial suturing) (Fig 2).

Clinical examination showed induration in periumbilical region with sinuses at three sites.

Diagnosis

USG revealed Abscess in abdominal wall above mesh. The Plan to enter peritoneum, assess status and possibility of removal of mesh was discussed and after consent the patient was taken up for surgery.



Fig. 1. Mesh placed intraperitoneally during first surgery



Fig. 2. Clinical photo 6 months after 1st surgery

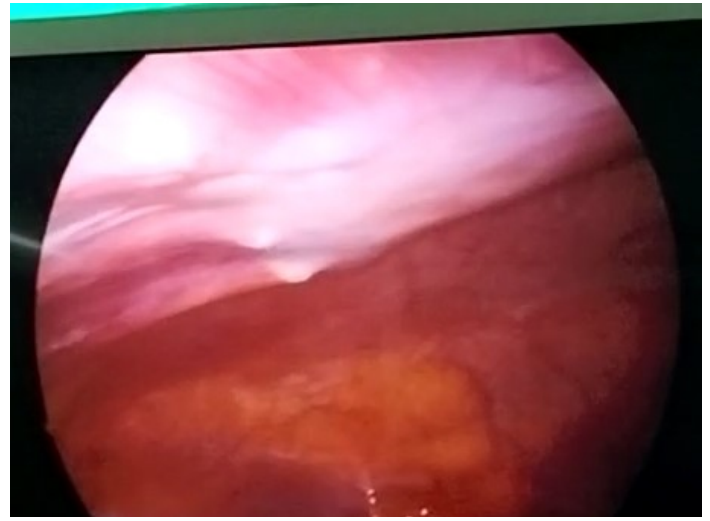


Fig. 5. After Aspiration

Intervention

Under High SA, Palmer's entry was made. The abdominal cavity looked as if we are entering for first time with nil adhesions and peritoneum covering the mesh completely as if no mesh is inside (fig 3). Hence decision not to do any dissection was made. With the Camera inside the abdomen, the abscess cavity was approached through sinus sites and pus of about 50 ml drained using suction. Making sure not to make hole in peritoneum, wash was given and ROMOVAC drains placed above mesh (Fig. 6). Drains remained for 2 weeks and removed. Patient is doing well now.

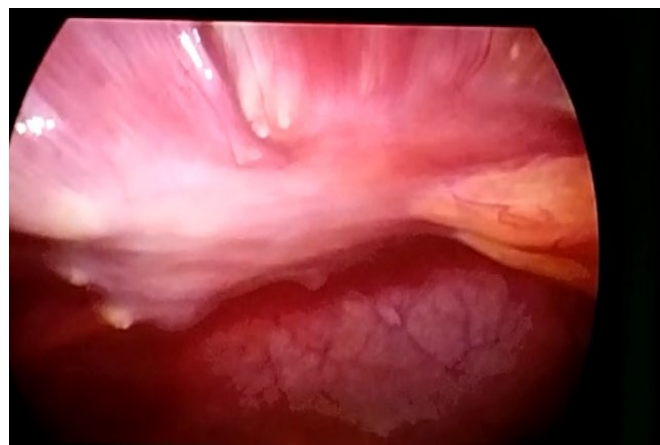
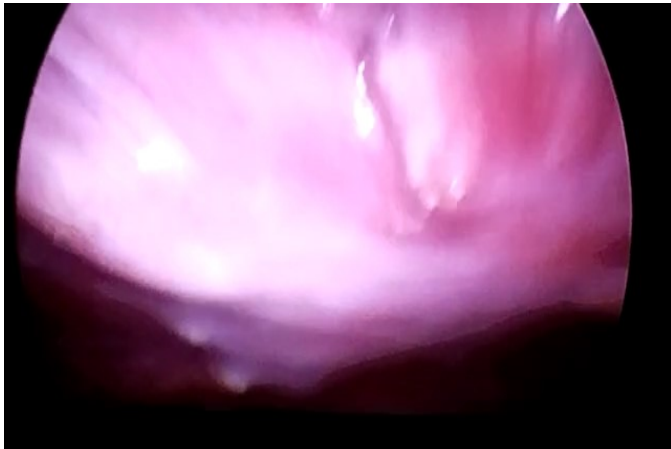


Fig. 3 & 4. Intra abdominal pictures during 2nd surgery. Bulge (Abscess)



Fig. 6. ROMO Vac Suction drains placed in anterior abdominal wall

DISCUSSION

Laparoscopic intraperitoneal onlay mesh (IPOM) repair is the best and longest studied minimally invasive ventral hernia repair technique.³ however the most common complications of mesh repair are SSI, seroma, hematoma, readmission and recurrence, which are studied.⁴ Despite progress in mesh technology and the development of coated meshes designed to lower the risk of adhesion formation, the potential risks associated with an intraperitoneal foreign body have not yet been eliminated.^{5,6,7} Traumatic mesh fixation increases the risk of adhesions, visceral damage, nerve injury, and acute and chronic pain. Reduction of the hernia sac with closure of the hernia defect is difficult with laparoscopic IPOM, and is often omitted leading to higher recurrence rates, eventration (pseudorecurrences), and seroma formation.^{8,9,10} However this case stood as an exception where we saw two different things unknown to us so far. Firstly the Mesh integration into peritoneum so perfect that it is almost invisible without a trace of adhesion. There is not a single study/picture available as to see how a mesh looks inside abdominal cavity after 6 months of laparoscopic repair and here we have full video and Pictures.(Fig 3,4, &5) Secondly, mesh infection forming an abscess in anterior abdominal wall which developed sinuses along transfascial suture lines. Ours is a rural setup hospital with limited resources and accessibility to advanced equipments. The minimally invasive approach to drain pus using suction drains without dissecting peritoneum or removing mesh which itself is going to lead to significant morbidity. This is the first case reported so far in the literature about Abdominal wall abscess with fistulas and would be really helpful for any surgeon who may come across similar situation in the future.

Declarations:

- Ethical approval- NA
- No Competing Interests
- Authors Contributions-NA
- Funding- NA
- Data obtained from Author's Patient after Written Consent.

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