



RESEARCH ARTICLE

MESH RELATED INFECTION AFTER 10 YEARS OF INITIAL LAPAROSCOPIC HERNIA REPAIR:
A CASE REPORT

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ABSTRACT

Hernia repairs are day to day procedures performed by General surgeons. Mesh hernia repairs have brought significant improved outcomes than primary hernia repairs. A limiting aspect associated with mesh hernia repair is chronic mesh infection. Such patients pose management challenge and are difficult to treat. Here we report our experience in treating one such a patient with chronic mesh infection after 10 years of initial laparoscopic Hernia surgery

Key words:

Mesh Hernia Repair,
Mesh Infection,
Mesh Removal.

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INTRODUCTION

Since the incorporation of prosthetic materials for the repair of hernias provide better cure rates and low recurrence rates than the primary hernia repairs (Luijendijk et al., 2000). There is rise in concern over the episodes of mesh related infection. The more challenging aspect is to offer optimum management strategy for such patient. As synthetic mesh is a foreign material it can act as a favorable environment for bacterial proliferation and form a biofilm when infected. This may lead to various complications as chronic discharging sinus at the port site, abscess formation around mesh and even sepsis (Narkhede et al., 2015). Various management options for such situation have been described including conservative management (Alston, 2013), debridement, irrigation (Narkhede et al., 2015), surgical removal (Szczerba, 2003), and very often combined Medical and surgical approach (that is antibiotics and complete surgical removal) (Falagas, 2005). Here we report our case of chronic mesh infection after 10 years of initial laparoscopic inguinal hernia repair that did not respond to initial conservative treatment and then treated surgically with complete mesh removal with no recurrence seen after a follow up period of 5 months.

Case report: A Gentle man of 49 years age reported to our emergency surgical department with a complaint of uncomfortable increasing swelling in his lower abdomen since last six months with associated features of fever (mild 99 °F to 100 °F) and tenderness over the reported region. Patient revealed history of laparoscopic inguinal hernia repair about ten years back, patient had documented temperature of 99.8 °F at the admission and tender swelling of 7cm x 7cm in the left inguinal region. Tenderness was more pronounced on deep palpation. No other significant history revealed. Routine laboratory test showed white cell count of 8000/ m³ with neutrophils of 76%. Ultra sonography of abdomen and pelvis showed a collection of 120 ml in left iliac fossa and aspiration (complete) of collection showed puss and sent for cultural sensitivity. Patient was put on antibiotics (empirically-on piperacillin and tazobactam) on repeat ultra sonography after three days again showed a collection of 100 ml with persistent tenderness over the reported region. CT scan was done which also reported a collection measuring 4.5 x 3.8 x 5.6 cm at the said region with significant adjacent fat stranding. However no intra-abdominal extension was reported. Meanwhile cultural sensitivity revealed growth of pseudomonas aeruginosa sensitive to ciprofloxacin, piperacillin/ tazobactam.



Figure 1.

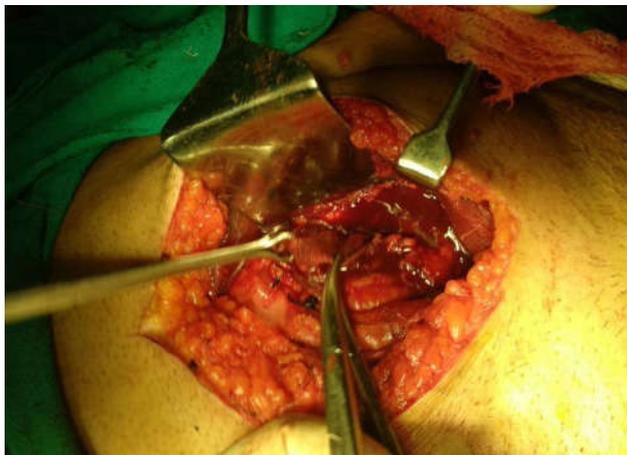


Figure 2.

Since the repeat ultrasonography persistent collection with tenderness a decision of infected mesh removal was planned. On exploration the complete infected mesh with surrounding abscess was removed without peritoneal breach. The wound was properly irrigated and closed with a suction drain. Post-operative antibiotics were continued as per culture and sensitivity report. Drain was removed after five days. Patient remained in good health status afterwards with no recurrence seen after a followup period of five months.

DISCUSSION

Although introduction of synthetic material brought a landmark development in hernia repairs, it did bring some unpleasant complications. Synthetic meshes being foreign bodies, when incorporated into the body, may have various non-infectious complications (such as seroma, rejection, migration, adhesions and pain) (Falagas, 2005) and infectious complications.

The usual causative organisms isolated are staphylococcus species (especially staphylococcus aureus) Streptococcus species (including group B Streptococcus), Gram Negative bacteria mainly Enterobacteriaceae) and anaerobic bacteria (including Peptostreptococcus species) (Falagas, 2005; Taylor, 1999). Rarely candida species or microbacterium species or Pseudomonas aeruginosa were involved (Nolla-Salas et al., 2002; Matthews et al., 1999; Akyol, 2013). The treatment of infected mesh is possibly by local debridement, irrigation, mesh removal and systemic antibiotics (Narkhede et al., 2015).

Conclusion

Conclusion there is no proper published literature determining specific risk factors for mesh related infections nor a properly described management protocol. Patients were treated as per individualized therapy. Proper "aseptic" measures and techniques are paramount to reduce such incidences.

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