

Late Mesh Extrusion In A Case Of Incisional Hernia Repaired With Polypropelene Mesh

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Citation

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Abstract

Late extrusion of the mesh several years after initial repair is rare and not associated with the infection usually. Excision of the mesh is necessary but reconstruction of the defect is dilemma. In presence of infection a reconstruction by myofascial flap is preferred while in case of late mesh extrusion a new prosthetic mesh can be used for reconstruction. We managed such a case by replacing the extruded mesh by the new mesh with success.

CASE

A 62 year old man presented with white nylon mesh protruding from the previous operative scar (Figure 1).

Figure 1



About ten years back he was operated for closure of peptic perforation in emergency after which he developed incisional hernia which was managed by introducing mesh over the defect. Patient was happy there after for about four

years when he noticed some plastic threads coming out of the operative scar. Gradually part of the mesh protruded out which brought patient to us. After examination we noticed a dirty black nylon mesh extruding from the previous operative scar 5 centimeters above the umbilicus at two places without any discharge or signs of infection or inflammation. Impulse on cough was evident over the operative scar without any underlying causative factor like chronic cough, constipation or urinary complaints in history, examination or investigations.

On exploration the proline mesh was found protruding through the linea alba. The defect in the linea alba extended above and below by sharp scissors to enter the preperitoneal space where the mesh was found crumpled and diffusely adherent to averlying rectus sheath and peritoneum below. The mesh was excised (Figure 2) with difficulty and a tear in peritoneum closed.

Figure 2



Rectus sheath was opened on both sides and the posterior sheath closed by double breasting. A new 15x10 centimeters polypropelene mesh was placed over this floor and fixed to it by proline number 1-0 sutures. Recti were opposed by vicryl 1-0 over the mesh followed by anterior rectus sheath, subcutaneous tissue and skin in that order.

The patient was discharged after skin suture removal on the tenth day. He was under routine follow up for about a year without any complaints.

DISCUSSION

Management of extruded mesh used to repair the incisional hernia is a challenge for surgeons. Introduction of the non absorbable synthetic material in the form of mesh for the reinforcement of the anatomical structures was a revolution in the hernia surgery [1]. Polypropylene, polyethylene, polytetrafluoroethylene, polyester, polyglactin are being used widely for the abdominal fascial reconstruction with the advantage of less recurrence. But use of the mesh without maintaining sterilization and surgical principles, inadvertently especially by less experienced surgeons led to increased incidence of complications of the meshplasty. Apart from general wound complications, the infection, extrusion, and enterocutaneous fistula formation are mesh related complications [2, 3] commonly seen. Mesh infections are resistant to wound care and antibiotics. Often, successful treatment of the abdominal infection requires removal of the infected mesh and staged abdominal reconstruction. This can be achieved by either using a new prosthetic mesh or by reconstructing the myofascial flaps. In the scenario of infected mesh it is not considered wise to replace the infected mesh with the new one in which the chances of infection of the new mesh are very high and sometimes unavoidable [4]. Components separation method [5], rectus

turn over flaps [6], fascial partition or release technique[7] are the few new techniques for the repair of the abdominal wall defect.

Mesh extrusion following infection of the wound and mesh in the early postoperative period is not uncommon. But the extrusion of the mesh lately years after the initial repair is rare and unlikely to be associated with the infection. Faulty surgical technique, want of knowledge of anatomy, poor surgical training and inadequate experience are the main culprits but the patient factor such as straining due to chronic cough, obstructive urinary complaints, and chronic constipation can not be ignored. Extruded mesh from the abdominal scar gives the hideous view which is intolerable for the patient and nightmare for the surgeon.

Extruded mesh in presence of infection warrants radical excision of the mesh, clearance of the infected tissue followed by closure of the defect by reconstruction of myofascial flaps. But some surgeons still prefers to use absorbable mesh in the contaminated field [8] to avoid recurrence. In case of a late mesh extrusion without apparent signs of infection and inflammation, excision of the extruded mesh might be followed by abdominal wall reconstruction using a new prosthetic mesh. Careful excision of the extruded mesh without injuring the tissue, Preservation and redefining the anatomy of the floor, search for infective foci and their radical excision are necessary to avoid the infection of the new mesh. A new mesh should be placed with sterile technique on a well defined floor with adequate fixation to the floor to avoid the re extrusion. The mesh should be covered with adequate soft tissue before opposing the skin.

CONCLUSION

Late extrusion of the mesh without signs of infection may be managed by excision of the extruded mesh followed by placement of new mesh with less recurrence and infection.

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