

Mesh related infection of ventral hernia repair and its management with antibiotics and saline dressing

Dear Editor,

Recently, the use of mesh has become the standard of care in hernia repair due to reduced recurrence rates and technical ease of operation. However, mesh-related complications such as seromas, adhesions, chronic severe pain, prosthesis migration, mesh rejection, and mesh-related infections are not uncommon. Antibiotics and mesh-saving surgeries are not sufficient enough to eradicate the infection in most of the cases. [1-3] Therefore, the standard recommendation is to explant the mesh. Mesh removal is not only technically challenging but also leads to recurrence of incisional hernia. Innovative methods have been adopted to salvage the infected mesh. [4,5] Recently, we successfully managed one such patient with saline dressings.

A 30-year-old morbidly obese male presented with reducible incisional hernia following two previous abdominal surgeries: he had had undergone intestinal stoma creation for perforation peritonitis and subsequently reversal of the stoma 3 months later. A large incisional hernia occurring through midline incision was noted. He underwent mesh hernioplasty with 15 cm x 15 cm polypropylene mesh. His post-operative period was uneventful and was discharged in satisfactory condition. A month later he presented with thick muco-purulent, foul smelling discharge from the surgical scar and exposed mesh. He was admitted and treated with intravenous antibiotics as guided by culture sensitivity. The wound with exposed mesh was managed with daily saline dressings. Initially dressing was done as in-patient and subsequently in out-patient department. The wound healed well without the need of mesh removal. [Fig 1]

Incidence of mesh-related infection has been reported as high as 13.6%. [3] The rate of infection is related directly to the underlying risk factors such as malnutrition, diabetes, immunosuppression, chronic obstructive pulmonary disease, tobacco and alcohol abuse, medical therapy with steroids, renal failure and obesity. These medical co-morbidities are associated

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Fig 1. Infected mesh wound before (1A) and after (1B) treatment with saline dressing and antibiotics

with decreased perfusion of the skin and subcutaneous tissues. Our patient morbidly obese and was a tobacco chewer. The type of prosthetic material or the precise technique used for hernia repair may also influence the incidence of mesh infection. The most common microbes associated with mesh infection are *Staphylococci* (especially *Staph aureus*), *Streptococci* (including Group B *Streptococci*), Gram-negative bacteria (mainly *Enterobacteriaceae*) and anaerobic bacteria (including *Peptostreptococci*). In a study of mesh-related infections following ventral hernia repair, 63% were found to be associated with methicillin-resistant *Staphylococcus aureus* (MRSA). *Candida* species and *Mycobacterium* species are rarely involved.[6]

Surgical-site infections continue to be a major source of morbidity throughout the world, accounting for almost 40–60% of all postoperative complications.[5] Mesh-related infectious complications usually necessitate recurrent surgical intervention. Standard surgical recommendation is to remove any contaminated or exposed prosthesis. But the removal of the prosthetic materials is often technically difficult when there is tissue incorporation. It is also associated with increased risk of subsequent enterocutaneous fistula formation. [6]

From our experience it appears that in selected cases conservative management with intravenous antibiotics and saline dressings can be adopted which will not only decrease the morbidity associated with mesh removal but will also the cost associated with repeated surgical operations. However, we have to be very selective in choosing patients for conservative management of mesh infection.

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