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Chronic Mesh Infection after Incisional Hernia Repair. Factors Influencing Negative Outcomes of Complete Mesh Removal

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Abstract
Background: The treatment of incisional hernias has radically changed over the last 50 years due to the introduction of mesh repair, which has been proven to be superior to tissue repairs in terms of recurrence. Severe complications such as bacterial contamination, enteral fistulas and severe visceral adhesions are the bane of mesh repair and lead to great challenges as far as treatment is concerned.
Methods: From January 2009 to December 2018, we retrospectively collected operative and outcome data on reoperation following septic complications of incisional hernias (IH) mesh repair in 89 patients. For adjustment, comorbidities, mesh location, prognostic nutritional index (PNI) and operative time were included in an SPSS data analyzer.
Results: in the referred interval 89 patients (29 males) met the inclusion criteria. The mean time for the onset of infections 15.04±0.95 months and the number of previous abdominal interventions varied from 1 to 5. Wound infections were reported to be the primary factor for mesh infection. Following removal only 43% of meshes were found to be positive for bacterial infections; the most common species detected being *St. aureus*, *MRSA* and, *Enterobacter spp*. Different techniques of mesh removal and abdominal wall closure were used. After abdominal wall closure, 54% of patients developed post-operative complications with a mortality of 12%.
Conclusion: The risk of infection after abdominal wall reconstruction (AWR) appears to be higher than other clean abdominal procedures. Mesh removal is mandatory when the infection prolonged over 3 months. The procedure is associated with a high rate of morbidity and mortality and with low quality of life if the abdomen can't be closed. Prevention is the best treatment option.
Key words: incisional hernia, chronic mesh infection, entero-cutaneous fistula, mesh removal, negative outcomes