Outcomes of Mesh Versus Tissue Repair in Emergency Incarcerated Hernia

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Abstract

Emergency incarcerated hernia repair presents a clinical dilemma regarding the safety of mesh use in potentially contaminated fields. This prospective cohort study compared outcomes between mesh and tissue repair in emergency incarcerated hernia cases, focusing on infection rates, recurrence, hospital stay, and postoperative morbidity. A total of 120 patients presenting with incarcerated abdominal wall hernias were included and divided into two groups: mesh repair (n = 62) and tissue repair (n = 58). Mean age was 49.6 ± 13.8 years, with 68 males and 52 females. Surgical site infection occurred in 6.5% of mesh repairs versus 15.5% of tissue repairs (p = 0.041). Recurrence within 12 months was significantly lower in the mesh group (3.2%) compared with tissue repair (13.8%, p = 0.02). Mean hospital stay was shorter in the mesh group (5.8 ± 2.1 days) than tissue repair (7.2 ± 2.5 days; p = 0.03). No statistically significant difference was observed in postoperative pain scores or seroma formation. These findings demonstrate that mesh repair, when performed with appropriate aseptic precautions, provides superior long-term outcomes and reduced recurrence without significantly increasing infection risk, supporting its selective use in emergency incarcerated hernia management.

Keywords

Emergency hernia repair, mesh repair, tissue repair.