

Evaluation of Mesh Reinforcement during Intestinal Stoma Closure in Prevention of Stomal Site Incisional Hernia: Randomized Controlled Trial

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Abstract

Background: Incisional hernia is an undervalued complication after stoma closure, with rates about 40%. Mesh-reinforced stoma reversal might be a simple and applicable approach to decrease the frequency of incisional hernia. There is a current debate about efficacy of this technique in preventing incisional hernias following stoma closure.

Methods: In this prospective clinical study, all patients with temporary stoma who admitted to Mansoura University Hospital at the period from February 2019 to April 2021 and fulfill the eligibility criteria were distributed into 2 groups. In group I conventional sutured fascial closure was done while in group-II mesh reinforced fascial closure was done during stoma reversal.

Results: Time to stoma closure had mean values of 26.76 and 24 weeks in Groups 1 and 2 respectively ($p = 0.430$). Surgical site infections (SSI) were encountered in 20% and 19% of patients in the two groups ($p = 0.868$). The occurrence of stoma site incisional hernia (SSIH) showed a significant increase in Group 1 (20% vs 2% in the other group – $p = 0.009$).

Conclusion: prophylactic mesh reinforcement throughout stoma closure significantly reduces the incidence of stoma site incisional hernia with no significant increase in the incidence of the stoma site wound infection.

Key words: stoma closure, mesh reinforcement, stoma site incisional hernia