Is it Safe Not to Fix the Mesh during Open Repair of Incisional Hernias? Our Centre's Experience

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Abstract

Introduction: Currently, there is a wide range of postoperative abdominal wall hernia surgeries. According to the literature, the most commonly used is open Sublay hernioplasty. Traditionally, the mesh is fixed to the abdominal wall during this surgery. In the reviews, we found several authors who did not fix the mesh during these surgeries and reported good results, but no randomised comparative studies have been conducted.

Objective: We decided to compare postoperative abdominal wall hernia hernioplasty with and without mesh fixation in a prospective randomised trial.

Methods: The study was conducted at the Vilnius University Hospital from June 2018 to August 2024. 57 patients were studied, divided into two groups - one who underwent sublay hernioplasty with mesh fixation and the second, in whom the mesh was not fixed during sublay hernioplasty. A one-year follow-up assessment was performed. The study examined the duration of the operation, hospitalisation time, postoperative pain level, quality of life and the incidence of postoperative complications.

Results: Of the 38 women and 19 men who participated in the study, 30 were with mesh fixation and 27 were without it. The mean patient body mass index was 31.57 ± 5.96 (19.5–49.6). The most common hernia width according to the European Hernia Society (EHS) classification was W2. A significant difference in the duration of the operation between the two groups was found - 108.00 ± 47.35 (40–235) minutes in the mesh fixation group, compared with 75.74 ± 30.25 (35–150) minutes in the non-mesh fixation group ($p < 0.05$). A higher pain level was also observed on postoperative day 10, 3.03 ± 2.54 in the mesh fixation group compared to 1.67 ± 2.22 in the non-mesh fixation group ($p < 0.05$). Another statistically significant difference was observed in the occurrence of abdominal wall seromas at 6 months (16.6% with mesh fixation compared to 0% without mesh fixation, $p < 0.05$). There was no hernia recurrence in either group.

Conclusions:

1. Open surgery for incisional hernias without mesh fixation does not increase the risk of complications.
2. Open surgery for incisional hernias without mesh fixation reduces the operation time and causes less postoperative pain.