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# Prevention of Adhesions by Omentoplasty: An Incisional Hernia Model in Rats

Prevention of Adhesions by Omentoplasty:
An Incisional Hernia Model in Rats

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**Abstract:** Background and Aim: Adhesion formation following abdominal wall hernia repair with prosthetic mesh may lead to intestinal obstruction and enterocutaneous fistulae. The purpose of this study was to compare the efficacy of fibrin glue (FG) and omentoplasty in the prevention of adhesion formation in a polypropylene mesh (PPM) abdominal wall replacement model. Materials and Methods: The study consisted of 3 groups of rats. A full-thickness abdominal wall defect was replaced with PPM. The control group (group 1) had no further treatment. The under surface of the PPM was covered with human FG in the FG group (group 2) and with greater omentum in the omentoplasty group (group 3). Two observers blinded to the randomization assessed the degree of adhesions (0-4) to PPM and percentage of the PPM area covered by adhesions (0%-100%). Results: The degree of adhesions in group 1 was significantly higher than that in groups 2 and 3. Group 2 had a higher adhesion degree than group 3. The mean percentage of the patch surface area covered by adhesions in group 1 was higher than that in groups 2 and 3. This was higher in group 2 than in group 3. Conclusion: FG reduced the adhesions, but the greater omentum is an autologous anti-adhesive barrier and omentoplasty reduced adhesions more significantly than FG.

**Key Words:** Incisional hernia, polypropylene mesh, fibrin glue, omentoplasty

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