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**Topic :** Intraperitoneal composite meshes (integration to the abdominal wall and adhesion prevention)

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**PERITONEAL ADHESIONS TO PROSTHETIC MATERIALS: AN EXPERIMENTAL COMPARATIVE STUDY OF TREATED AND UNTREATED POLYPROPYLENE MESHES PLACED IN THE ABDOMINAL CAVITY**

Frequently hernia repair requires polypropylene (PP) meshes, carrying a well known adhesiogenic risk when placed in contact to intestine. The aim of this experimental study in a rat model was to assess the role of some materials, when combined with PP, in preventing the adhesions (AD) formation.

60 rats assigned to 5 groups for intraperitoneal mesh placement: untreated PP, PP+polyurethane (PU), PP+Surgisis (SIS), PP+ePTFE and control group without mesh. 21 days, 3 and 6 mo.s after the operation, assessment of AD formation, scoring AD in terms of extent and type and the Adhesion Index (AI).

No significant difference between PP+SIS, PP+PU and control in AD and AI. PP+SIS had significantly lower AD and AI vs PP+ePTFE. PP+PU had significantly lower AD and AI vs PP+ePTFE. Control group had significantly lower AD and AI than PP+ePTFE. PP had significantly more AD and higher AI vs PP+ePTFE.

Adhesions' incidence is reduced, using treated PP meshes. PP+PU and PP+SIS were superior to PP+ePTFE in adhesion prevention.