

J Biomed Mater Res B Appl Biomater.  
2012 Aug;100(6):1621-6.

*Adhesion prevention in an intraperitoneal wound model: performance of two resorbable hemostats in a controlled study in rabbits.*

Hermans MH, Brown L, Darmoc M.

Adhesions, particularly in the abdominal and pelvic cavities, represent a significant clinical problem. Among other complications, they are considered the most common cause of intestinal obstructions in the Western world. The purpose of this study was to evaluate two commercially available hemostats for their ability to prevent adhesion formation in an abdominal wound model. The hemostats, a microfibrillar collagen-based composite and microporous polysaccharide spheres were used in a rabbit abdominal model. In the model the cecum was abraded and a peritoneal defect was created on the abdominal sidewall. The test materials were applied over the defects. Clinical and histological results were compared with control (no application of any hemostat at the defect site) on postoperative day 14. The results showed a significant reduction in the incidence, extent and severity of adhesions for both surgical hemostat materials compared with control. The microfibrillar

collagen-based composite showed a total absence of adhesions and a high level of reperitonealization. This preclinical study suggests that the use of surgical hemostats may help to reduce or eliminate adhesions and may promote reperitonealization. Collagen-based composite showed a total absence of adhesions and a high level of reperitonealization. This preclinical study suggests that the use of surgical hemostats may help to reduce or eliminate adhesions and may promote reperitonealization.