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The most frequent postoperative complication is caused by adhesions.

Injury of the peritoneum, causes an inflammatory reaction.

The rate of injury determining the rate and extent of the inflammatory response to that injury; the inflammatory reaction on its turn determines the extent of adhesion formation. This is an important fact to realize when performing intra-abdominal surgery, which is in fact operating inside the peritoneal organ, which is the largest serous membrane in the body and covers the visceral organs and lines the abdominal cavity

Thus the surgical knife is double edged and the surgeon as well as the patients should be aware of this. After all, adhesions may not only lead to chronic pain, but also the very serious small bowel obstruction, a deadly complication.

Patients should be informed about the possible complications, particularly in case of surgery with a high risk for postoperative adhesive complications. The high risk operations are for:

- Ovarium/tuba with a 35% chance of a readmission for adhesions < 10 yrs
- Colorectal with a 33% readmission risk
- Relaparotomy up to 32% inadvertent enterotomy
38% re-admission because of adhesions within 1 year
- Incisional hernia >70% complications at relaparotomy with intraperitoneal mesh.

Adhesions should be prevented when operating for incisional hernia. The intraperitoneal position of a mesh may lead to a number of complications.

Mesh adhesions may significantly increase the number of complications when performing a second laparotomy. A second laparotomy after a previous prolene mesh placement did lead to a 72% incidence of complications. A particular serious complication was the perforation of the bowel wall in more than 20%! These findings provide a new indication for the use of specific meshes in hernia surgery that avoid the formation of adhesions.