Inhibitory effect of a synthetic bioresorbable adhesion membrane on small bowel obstruction (SBO) in patients undergoing elective surgery for colon cancer: A randomized controlled trial

Surgery, Tokai University School of Medicine, Isehara, Japan

Background: Intraabdominal adhesion may occur in about 70% to 100% after abdominal surgery and is one of the most common causes of SBO. Seprafilm®, a synthetic bioresorbable adhesion membrane, has been reported not to decrease the incidence of SBO, but to significantly decrease the reoperation in patients with inflammatory bowel disease. However, the inhibitory effect of Seprafilm® on SBO in colon cancer remains unclear. We therefore conducted a randomized study to investigate the inhibitory effect of Seprafilm® on SBO in patients with colon cancer.

Methods: The study group comprised 345 patients (pts) with colon cancer who underwent curative surgery electively from 2006 through 2013. Seprafilm® were placed under the midline incision before closing the abdomen in 166 pts (Seprafilm® group), and no sheet of Seprafilm® was placed in the remaining 179 pts (control group). We compared the incidence of SBO and adhesive findings at the time of reoperation. SBO was defined as bowel obstruction which need decompression after readmission. The median follow-up period in the surviving patients was 66.3 months.

Results: Patient characteristics did not differ between the groups. SBO developed in 13 pts (7.8%) in the Seprafilm® group and 19 pts (10.6%) in the control group. SBO occurred within 30 days after surgery in 3 pts (23.1%) in the Seprafilm® group and 8 pts (42.1%) in the control group. The incidences tended to be higher in the control group, but the difference was not significant. Reoperation was required by 5 pts (38.5%) in the Seprafilm® group and 7 pts (36.8%) in the control group, with no...
significant difference. Among the pts who required surgery, SBO was caused by adhesion to the midline incision in 1 patient (7.7%) in the Seprafilm™ group and in 2 pts (10.5%) in the control group. This difference was also not significant. Multivariate analysis showed that a history of laparotomy was only an independent risk factor for SBO and the use of Seprafilm™ was unrelated to the incidence of SBO.

Conclusions: A midline incision was an infrequent cause of SBO in pts who underwent surgery for colon cancer. It was unclear whether the placement of Seprafilm™ under the midline incision can decrease SBO.

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Methods: We retrospectively studied the survival of patients by examining of our 5-year follow-up. A total of 161 colorectal cancer patients were recruited into this study. After propensity score matching (PSM), LT–LND-and HT-matched patients were compared to define a threshold capable to identify distinct prognostic categories of patients.