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Preliminary results of Sutureless Trabucco Sublay Ventral Hernia Repair. Prospective Multicenter Study.

International Hernia Study Group

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Background. In the ventral hernioplasty, sutures prevent mesh migration, mesh wrinkling and curling. However, suturing is time consuming, often challenging, could create tension in the mesh resulting in postoperative pain and complications.

Hypothesis.

There is no need for mesh suturing in ventral hernia repair if the mesh is rigid, macroporous, made of monofilament polypropylene and has flat-shape memory. This mesh will not migrate, wrinkle or curl when placed in a closed space even without suturing to the surrounding tissue. This prosthesis prevents hernia recurrence while lying flat and without tension. It is held in place by intra-abdominal pressure and connective tissue ingrowth.

Aim. Clinical evaluation of the new Tension- Free Trabucco Sublay Ventral Hernia Repair technique, which involves the use of rigid mesh without sutures.

Material. Since October 2003, 37 (25F, 12 M) patients aged 63 ± 12 referred to participating centers for ventral hernia repair entered to the study. Mean BMI was $32,6 \pm 5$. There were 26 (70%) incisional hernias and 11 (30%) primary defects. Type of the hernia according to size was as follows: W2 (5cm<defect<10cm)- in 8 (22%) patients, W3 (10cm<defect,15cm)- in 16 (43%), W4 (defect>15cm)- in 13 (35%). Oval Patch or Hertra 0 (Herniamesh SRL, Italy) polypropylene rigid mesh with flat-shape memory was used for the repair.

Methods. Patients were operated on mainly under general with antibiotics and thromboembolic disease prophylaxis. After closure of peritoneum and posterior abdominal fascia rigid mesh - was placed in retromuscular or preperitoneal space without suture fixation. Anterior fascia was then closed with a continuous suture. Relaxing incisions and Redon drainage was used, when necessary. In case the closure of posterior fascia was not feasible, the defect was closed with hernia sac or omentum to separate mesh from visceral organs.

Results. Duration of the operation was 106 ± 32 min, while duration of mesh implantation was 25 ± 12 min. Pain assessed on the first morning after surgery in VAS was 4 (1-8). Patients required mild pain relief drugs for 3 (2-6) days. Wound revision was necessary due to hematoma in one patient, and one fluid collection needed to be aspirated in another one. Average duration of hospitalization was 6 (3-15) days. Patients resume their usual home physical activity within one week after surgery. In early follow up- 4 (1 to 7) months, no recurrence or chronic pain was found.

Conclusions. Preliminary results indicate that sutureless sublay technique can be safe and effective in ventral hernia repair and study is continued.