

## **STANDARDIZATION OF LAPAROSCOPIC ILEOCYSTOPLASTY – EXPERIMENTAL MODEL IN PIG**

### **Aims of Study**

Neurogenic and non-neurogenic bladder dysfunction can cause lesion of upper urinary tract. The cases how does not answer to clinical treatment the surgical bladder augmentation, utilizing gastrointestinal segments remains the most widely accept technique. The ileocystoplasty is safe and efficient technique to create a reservoir with a low pressure and good capacity. The objective is to standardize the laparoscopic ileocystoplasty in porcine model.

### **Methods**

Ten male pigs (20-25Kg) were prepared for surgery under general anesthesia. After Veress needle introduction below the umbilicus scar, a pneumoperitoneum is created by insufflations of CO<sub>2</sub> until reach 15mmHg pressure. A trocar was placed in the midline for the laparoscope, with two lateral trocars added for operative instruments, being a 10 mm one at right and 5 mm one at left and other 5 mm trocar at left side. It was used about 15-cm of ileum that was isolated and meticulously cleaned by irrigation and detubularized along its antimesenteric border. The isolated ileum was fashioned in U-shaped plate by side-to-side anastomosis using continuous absorbable suture (2-0 Vicryl), it was performed by exteriorizing the bowel loop outside the abdomen through a 2 cm of the right port site. After that, the ileum patch was reintroduction into the abdomen with care do not kinking the mesentery. The incision of the abdomen was sutured (0 Vicryl) and reestablished the pneumoperitoneum. The bladder was isolated in the Retzius space and opened from the bladder neck to the interureteric bar utilizing untracision scalpel. The ileovesical anastomosis was performed intracorporeally by laparoscopic techniques utilizing running absorbable suture (2-0 Vicryl). The parameters used for evaluation were: operative time, enterovesical anastomosis time, intra-operative complications and a water-proof test.

### **Results**

All the animals tolerated the procedure without intraoperative compromise. Average operative time was 316,25 minutes, average enterovesical anastomosis time was 247,5 minutes. Intra-operative complications were observed in 3 animals, in two of them had subcutaneous emphysema and other with perivesical hemorrhage. The water proof test was considered negative in 6 animals (60 %) and positive in 4 animals where is added more stitches.

### **Conclusions**

The enterocystoplasty completed a 100 years<sup>1</sup>. The first experimental model of bladder augmentation was done in 1888 and clinical application of ileocystoplasty started in 1889<sup>2</sup>. Laparoscopic ileocystoplasty is feasible and safe in porcine model. Longer follow up is necessary to verify the post operative pain, local fibrosis and functional results of the laparoscopy ileocystoplasty.

### **References**

- 1) J Urol 1980; 126: 205-9.
- 2) Operative Urology. Baltimore, Williams and Wilkins 1982; pp. 98.