

103. Effect of Pneumoperitoneum on Adhesion Formation and VEGF Expression in Mice

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Objective. To evaluate the effect of pneumoperitoneum on postoperative adhesion formation and VEGF expression.

Measurements and Main Results. In the first experiment, adhesions were induced in 118 adult, female NMR I mice by monopolar lesions in uterine horns and pelvic sidewalls at laparoscopy and scored after 7 days at laparotomy. The effect of duration of pneumoperitoneum (10 and 60 min), insufflation pressure (5 and 15 cm H₂O) and insufflation gas (CO₂, helium) on adhesion formation were assessed. In a second experiment, pneumoperitoneum was maintained for 1 or 2 hours, and biopsies of abdominal walls and uterine horns were taken by laparotomy at different time points to assess VEGF expression by ELISA. Adhesion formation increased with duration of pneumoperitoneum ($p = 0.001$) and higher insufflation pressures ($p = 0.005$), but no differences were found between CO₂ and helium. Expression of VEGF increased 2-fold after 2 hours of pneumoperitoneum and remained elevated for at least 6 hours.

Conclusion. Pneumoperitoneum is a cofactor in adhesion formation, and peritoneal hypoxia, rather than acidosis, plays a key role by VEGF up-regulation.

104. Gasless Laparoscopic Total Hysterectomy as a Routine Procedure

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Objective. To present reasons to perform TLH.

Measurements and Main Results. Gasless laparoscopy with the AbdoLift, a reusable abdominal wall-lifting system, was used in the last 2 years to perform 107 gasless TLHs using conventional instruments and suture techniques, and in the last 50 cases bipolar conventional scissors developed for abdominal surgery. Gasless TLH using traditional techniques such as suturing and ligating is safe but time consuming. Performing this procedure with bipolar conventional scissors, our average operating time was 61 minutes (range 52–81 min). There were no conversions to laparotomy

and no intraoperative or postoperative complications. Postoperative pain was reduced compared with CO₂ laparoscopy. Women were discharged on postoperative day 4 and went back to normal activity after 2 weeks. Vaginal discharge stopped after 10 to 14 days. *Conclusion.* Gasless laparoscopy with conventional bipolar scissors allows TLH to be performed in a time range that approaches the range for the vaginal route.

105. Lift-Laparoscopy, a New Concept of Gasless Laparoscopy

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Objective. To evaluate a new technique of gasless laparoscopy.

Measurements and Main Results. For 5 years we have performed gasless operative laparoscopies with conventional instruments and a reusable abdominal wall-lifting system, Storz AbdoLift. There were no complications. Postoperative pain, especially shoulder pain, and its intensity, were reduced by gasless laparoscopy compared with CO₂ laparoscopy. Expensive laparoscopic instruments are avoided, especially disposable ones.

Conclusion. Lift-laparoscopy combines advantages of laparoscopy and laparotomy but excludes the disadvantages of both methods.

106. Hysteroscopic Diagnosis and Surgery for Intrauterine Pathology

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Objective. To evaluate results of hysteroscopic management of intrauterine pathology.

Measurements and Main Results. We performed diagnostic hysteroscopy and hysteroscopic removal of foreign bodies in 215 women (age range 18–47 yrs) with endometrial hyperplasia, 199 with endometrial polyps, 100 with adenomyosis, 198 with uterine septum, 2 with bicornuate uterus, 250 with submucous myomas, 140 with intrauterine synechiae, and 110 with foreign bodies in the uterine cavity. Surgery was performed with semirigid scissors, resectoscopy (resection or ablation of endometrium, submucous myomas or fibrotic polyps, intrauterine septum), and assisted by laparoscopy for final diagnosis of malformation,