

An experimental model of transgastric ooforectomy using a porcine model

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Abstract

Introduction: Transabdominal routes for surgery entail general anaesthesia with its inherent risks and complications (prolonged hospital stay, abdominal incisions that may be difficult in obese patients). Minimally invasive procedures require shorter hospitalization, have shorter recovery periods, less postoperative discomfort, and lower morbidity and complications. The purpose of this study was to use a porcine model to determine the feasibility and the safety of organ resection (oophorectomy and tubectomy)

Materials and methods: 10 Big White pigs between 25-30 kg underwent transgastric ooforectomy. The first 5 cases were performed in a hybrid procedure (laparoscopic-NOTES) in order to have a better control and supervise the maneuvers done by the mobile endoscope and to guide in the abdominal cavity.

Results: Adnexectomy was possible in all ten experiments. Full operative time (from starting endoscopy to complete gastrectomy closing) was 180 min to 270 min. The gastric defect closing was the most difficult manoeuvre lasting from 10 min with OTSC clips to 100 using endoloops and clips. The animals have tolerated well the experiments and there have been no remarkable incidents during our 10 experiments. In only one case a bleeding from gastrotomy required electric coagulation.

Conclusion: Transgastric ooforectomy in an experimental model is a procedure that requires advanced laparoscopical and endoscopical skills. Our early results are promising. Its application in humans needs further confirmation of the method.

Key words: transgastric ooforectomy, NOTES, transorificial surgery, interventional endoscopy, minimally invasive surgery

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