

## Transgastric endoscopic cholecystectomy with a single laparoscopic port in dogs: Hybrid NOTES

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**Purpose:** Transgastric endoscopic cholecystectomy was performed in conjunction with one laparoscopic port in four small to medium-sized dogs to evaluate the feasibility of scarless abdominal surgery

**Materials and Methods:** Three males and one female Beagle dogs underwent transgastric endoscopic cholecystectomy. Making one abdominal opening by a 5 mm trocar, a laparoscopic grasper was introduced through it. Gastric incision was made at the ventral antral region by endoscopic needle knife. By assist in visualization of gallbladder with the laparoscopic grasper, cholecystectomy was done by L-knife, which went through the single channel flexible gastroscope. After taking out the gallbladder through the oral cavity, gastric incision was closed by Endoclip.

**Evaluation:** Assessment categories of TEC consist of intraoperative, postoperative, hematological, radiological, microbiological, histopathological and endoscopic examination before and after the surgical procedure.

**Results:** Prognosis after TEC was generally good in each case. Whole blood exams showed mild, transient increased WBCs count and there were no sign of internal blood loss except in one case. Serum biochemical change was minimal in ALP and TBIL except ALT in that moderate peak occurred on POD7. On gastrography on POD4, there were no leakage sign through the gastric incision. Microbiologic cultures of abdominal cavity carried out on POD8 were negative. Histopathology of clipped site is now under the examination.

**Conclusion:** The results suggest that transluminal endoscopic operation with the laparoscopy can be successfully applied in small dogs to achieve intra-abdominal surgery without making external scar or causing side effect such as bleeding or infection.

**Key words:** cholecystectomy, transgastric, dogs

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