

Abstract

OBJECTIVE:

To evaluate the applicability of single-incision laparoscopic ovariectomy (SILOVE) in cats using a single-incision laparoscopic port (SILP); to compare surgical time, complications, and postoperative pain after SILOVE using a LigaSure (SILOVE-LS) or extracorporeal suture (SILOVE-ECS), and open ovariectomy (open-OVE).

STUDY DESIGN:

Randomized, blinded, prospective study.

ANIMALS:

Healthy, domestic female cats (n = 24).

METHODS:

Cats underwent physical examination, packed cell volume, total solids and blood urea nitrogen analysis. Cats were randomly assigned to 1 of 3 groups: SILOVE-LS (n = 8), SILOVE-ECS (8) or open-OVE (8). Surgical time, complications, and postoperative pain scores were recorded.

RESULTS:

Single-incision laparoscopic ovariectomy was successful in (n = 8) SILOVE-LS cats and (n = 5) SILOVE-ECS cats. Surgical time was significantly longer for the SILOVE-ECS group compared with the SILOVE-LS ($P < .0001$) and open-OVE ($P < .0001$) groups, which were not different ($P = .55$). Complications were more frequent in the SILOVE-ECS group and removal of the SILP was required to complete ovariectomy in 3 cats. Cumulative 4-hour pain scores were not different between groups.

CONCLUSIONS:

Single-incision laparoscopic ovariectomy using a SILP is a feasible method for OVE in cats. Single-incision laparoscopic ovariectomy using an extracorporeal suture is more time consuming and associated with more complications than either the SILOVE-LS or open-OVE methods