

Quilting Pattern for Subcutaneous Closure

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In the Literature

Travis BM, Hayes GM, Vissio K, Harvey HJ, Flanders JA, Sumner JP. A quilting subcutaneous suture pattern to reduce seroma formation and pain 24 hours after midline celiotomy in dogs: a randomized controlled trial. *Vet Surg.* 2018;47(2):204-211.

FROM THE PAGE ...

Complications from abdominal surgery can include seroma formation, infection, and postoperative pain. The rate of these complications varies from 3.9% for experienced surgeons to 11.1% for veterinary students. A prospective human study found a significant reduction in postoperative seroma formation when the subcutaneous tissue was tacked to the linea alba during closure.¹

In this prospective, randomized, blinded clinical trial, closure of the subcutaneous layer in 432 dogs undergoing abdominal surgery was performed with either a simple continuous pattern or a quilting pattern. The quilting pattern was designed as a continuous pattern with every 2 to 3 bites passing through the external rectus fascia of the linea alba. Abdominal surgeries included ovariohysterectomy ($n = 249$) or other abdominal surgery ($n = 183$) and were performed by students, residents, or surgeons.

Dogs that have undergone abdominal surgery should be evaluated for seroma formation, as it is a relatively common complication following abdominal surgery in dogs.

No difference in infection rates or closure times was identified, but significant differences in 24-hour postoperative pain scores and seroma formation were observed. Using the Glasgow Composite Measure Pain Scale, fewer dogs with higher pain scores were noted in the quilting group. Seroma formation was 17.7% in the nonquilting group and 4.4% in the quilting group. It is unclear how significantly this new pattern might affect complication rates for more experienced surgeons.

... TO YOUR PATIENTS

Key pearls to put into practice:

- 1** Dogs that have undergone abdominal surgery should be evaluated for seroma formation, as it is a relatively common complication following abdominal surgery in dogs.
- 2** A quilting pattern for subcutaneous closure consists of taking a bite of linea alba every 2 to 3 suture passes during continuous closure.
- 3** Surgeons who have experienced a high incidence of seroma formation in their patients following abdominal surgery should consider this new pattern, as it may help decrease the incidence of seroma formation.

Reference

1. Bercial ME, Sabino Neto M, Calil JA, Rossetto LA, Ferreira LM. Suction drains, quilting sutures, and fibrin sealant in the prevention of seroma formation in abdominoplasty: which is the best strategy? *Aesthetic Plast Surg.* 2012;36(2):370-373.