Does surgical tie technique influence the risk of postoperative complications for feline castration?

Marnie Brennan, Hannah Doit

**BOTTOM LINE**

- There is currently no peer-reviewed evidence available in the English language literature that indicates whether using a hand-tie method for the spermatic cord during feline castration reduces the risk of postoperative complications compared with a forceps-tie method.
- The choice of technique should, therefore, be based on a discussion of the risks and benefits with the client, the surgeon’s preference and, if they are available, individual practice guidelines.

**Clinical scenario**
You started work at a new practice about two months ago. You are rostered on to do surgery that morning, and there are several cat castrations to carry out. The veterinary nurse working with you that day, whom you haven’t worked with before, asks you how you do your cat castrations and, therefore, what equipment you need.

You have used a forceps-tie method since graduating, but ask the nurse what the rest of the team generally do. The nurse tells you that most of the team use a hand-tie method as, a few years ago, several cats experienced postoperative complications when a forceps-tie approach was used. You wonder if there is any evidence reporting the postoperative complication rates associated with these two techniques.

**The question**
In [cats undergoing castration] does using a [hand-tie method versus a forceps-tie method for the spermatic cord] result in a [decreased risk of postoperative complications]?

**Search parameters**
The search terms (cat.mp. OR cats.mp. OR feline.mp. OR Felis.mp. OR felidae.mp. OR exp Cats/ OR exp Felis/ OR exp Felidae/) AND (sterilis$<$.mp. OR steriliz$<$.mp. OR neuter$.mp. OR de sex$.mp. OR castrat$.mp. OR orchiect$.mp. OR orchidect$.mp. OR gonadect$.mp. OR exp Castration/ OR exp Orchiectomy/) AND (hand-tie.mp. OR hand tie.mp. OR cord tie.mp. OR cord-tie.mp. OR square tie.mp. OR square-tie.mp. OR forcep tie.mp. OR forcep-tie.mp. OR haemostat tie.mp. OR haemostat-tie.mp. OR hemostat tie.mp. OR hemostat-tie.mp. OR figure of eight tie.mp. OR figure of 8 tie.mp. OR figure-of-eight tie.mp. OR figure-of-eight tie.mp. OR figure-of-eight tie.mp. OR figure-of-eight tie.mp. OR figure-of-eight tie.mp. OR figure-of-eight tie.mp. OR figure-of-eight tie.mp. OR figure-of-eight tie.mp. OR figure-of-eight tie.mp. OR instrument tie.mp. OR instrument-tie.mp. OR spermatic cord tie.mp. OR spermatic cord tie.mp. OR spermatic cord knot.mp.) were used in both a Medline search and CAB Abstracts search.

**Search outcome**
- One paper was found in the Medline search.
- One was excluded because it did not answer the question.
- In total, no relevant papers were obtained.
- Two papers were found in the CAB search.

- One was excluded because it did not answer the question.
- One was excluded because it was not written in English.
- In total, no relevant papers were obtained.
- Overall, no relevant papers were identified.

**Search last performed:** 24 November 2020

**Summary of evidence**
No easily available evidence base was found to answer this question. There is a possibility that a paper published in Portuguese may answer the question.

However, due to the rapid nature of these evidence evaluations, it is not standard practice for articles to be translated as part of the assessment process. During a full systematic review of the evidence, it would be expected that articles of this nature would be translated and fully assessed.

**Comments**
There were no peer-reviewed articles written in English that directly compared the hand-tie and forceps-tie approaches for feline castrations. Other resources such as textbooks, expert opinion, narrative reviews and online sites can be useful when peer-reviewed evidence is scarce. However, there needs to be an appreciation of the limitations of these evidence sources when using them in decision making.

Marnie Brennan, Hannah Doit, Centre for Evidence-based Veterinary Medicine, University of Nottingham, Sutton Bonington, UK
doi: 10.1136/vr.m4742

**References**

The "Evaluating The Evidence" section of Vet Record aims to answer specific clinical questions using a systematic approach to identify and succinctly summarise the relevant evidence from the scientific literature. The shortcomings of this evidence are also taken into account, thereby enabling vets to incorporate the best available evidence from the literature when making clinical decisions. Please contact us at vet.research@bmj.com if you have an article you would like us to consider for publication in this section.

19 December 2020–2 January 2021 | VET RECORD