

## **OBSERVATIONS REGARDING SOME SURGICAL TECHNIQUES OF TONSILLECTOMY IN DOGS**

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### **Summary**

Tonsillectomy in dog is applied to cases with chronic recurrent tonsillitis, a disease frequently found in this species and also when medicamentary treatment does not offer favorable results. Often the only effective treatment in chronic recurrent tonsillitis is surgery, especially that delay of surgical intervention leads to metastasization of the infection in endocardium and joints. Given the clinical importance of chronic tonsillitis, with all its implications, and that surgical treatment is most effective, the aim of this work was to use several surgical techniques of tonsillectomy, which can be practically applied in different situations, depending on the material and technical possibilities.

**Key words:** tonsillectomy, dogs

Tonsils are clumps of tissue on both sides of the throat that trap bacteria and viruses entering through the throat and produce antibodies to help fight infections (2). Tonsillectomy, or surgical removal of the tonsils, is a common operation that can be performed by several different techniques in dogs. The typical recuperation after a tonsillectomy often involves a week or more of pain and discomfort due to the exposure of the throat muscles after the tonsils are removed (2). Thus, it is very important to reduce morbidity for postoperative patient comfort, reduction of pain, improving oral intake and decreasing the risk of dehydration, infection, and post surgery hemorrhage (1).

### **Materials and methods**

Our observations were made on a number of 18 cases of race, age, sex and body mass different, cases had chronic recurrent tonsillitis, each patient by applying to one of the six surgical techniques.

**Preoperative preparations** consisted in neuroleptanalgesia with local analgesia, contention being made in dorsolumbar recumbency with mouth fixed in open position (fig. 1).

#### **Surgical techniques applied:**

1. Tonsillectomy using scalpel and hemostasis by forcipressure for 5 minutes and cutting of the pedicle with scalpel (fig. 2)

2. Tonsillectomy by limited twisting between two hemostathic forceps applied at a distance of 0.5 cm one from another on tonsillar pedicle, the distal one shall be rotated until it breaks the pedicle (fig. 3).

3. Tonsillectomy by transfixing ligature with synthetic wire, for example Vicryl polyglactic 1-0 type, applied on tonsillar pedicle. The pedicle is than knotted and cut distal to the ligature (fig. 4).

4.

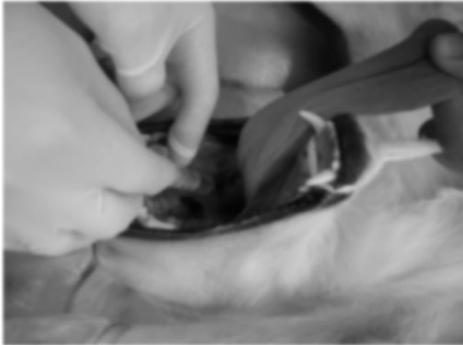


Fig. 1 Local analgesia and contention



Fig. 2 Tonsillectomy using scalpel

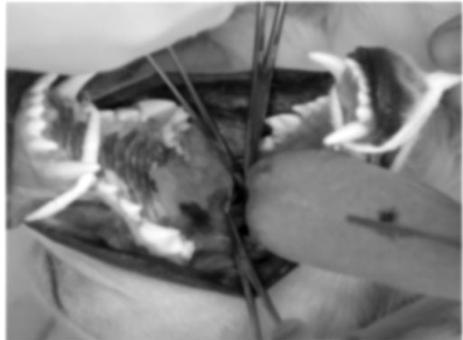


Fig. 3 Tonsillectomy with two hemostathic forceps

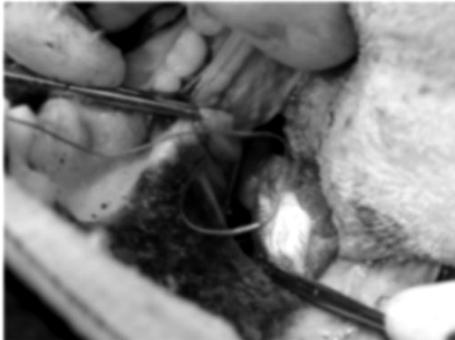


Fig. 4 Tonsillectomy by transfixing ligature

5. Tonsillectomy with a tonsillectom is realized after a fixation of the tonsil with a hemostatic forceps. The tonsillectom is fixed and tight for 5 minutes on tonsillar pedicle, and then the loop of the tonsillect is tight until the pedicle is cut (fig. 5).

6. Tonsillectomy followed by suture of the palatine crypts, is the process by which after ablation of the tonsils, the edges of the palatine crypts are brought and maintained in contact with suture in two or three interrupted points (fig. 6).

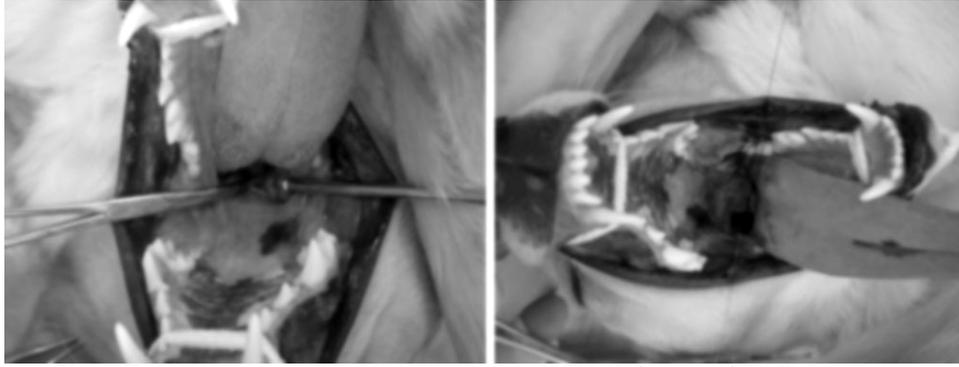


Fig. 5 Tonsillectomy with the tonsillectom

Fig. 6 Suture of the palatine crypts

7. Tonsillectomy using electric scalpel (fig. 7) has the advantage of a good hemostasis by cauterization (electric field emits a high temperature, about 400° C).

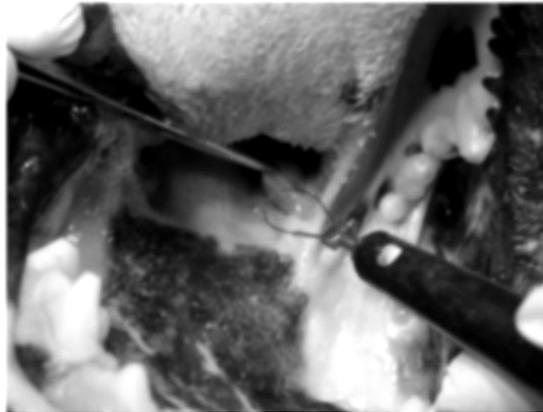


Fig. 7 Tonsillectomy using electric scalpel

### **Results and discussions**

Clinic postoperative evolution of patients was good; we did not observe the occurrence of complications. In the first 2 days postoperative, we found some difficulty in deglutition although food had a semi-fluid consistence and each patient was given 1-5 ml of Novasul daily. Septic complications have prevented by injection of Penstrep for 3-5 days. Good performing of surgical techniques and postoperative cares has led to successful surgical interventions.

Traditional tonsillectomy techniques are associated sometimes with moderate morbidity and the potential for serious hemorrhage (6). Thus, Volk et al. (6) tested other techniques of tonsillectomy, such mucosal intact laser tonsillar ablation (MILTA). This technique was compared with standard "cold" knife tonsillectomy comparing parameters such as onset of eating solid food, amount of food ingested per day, onset of normal activity, and degree of weight loss. The dogs were observed carefully during the postoperative period, when MILTA showed significant benefit over the standard technique and none of the tonsils showed mucosal ulceration. With the preservation of the overlying mucosa, the possible clinical advantages of this approach to tonsillectomy are the absence of bleeding, avoidance of general anesthesia in older patients, less operating time, and decreased postoperative morbidity. Thus, preservation of the tonsillar capsule as much as possible may be an important issue in tonsillotomy surgeries (5).

With good results, safety, and cost-effectiveness, in human medicine is used ultrasonic harmonic scalpel for tonsillectomy (4), but also other techniques (radiofrequency ablation, thermal welding, carbon dioxide laser) methods which can be also performed in dogs.

It can be seen that there are several techniques for ablation of the tonsils. The choice of method depends on the surgeon's training, comfort with the equipments, experience, and informations concerning animal status.

### **Conclusions**

Tonsillectomy as a method of treatment in recurrent tonsillitis is a surgical procedure which may be performed in veterinary cabinets, and even in field veterinary services, because some procedures do not require sophisticated equipment and instruments.

All methods used by us have proved effective; they can be used differentiated, depending on preferences, equipment and patient status.

Risks to which the patient is incurred are not higher than other surgical procedures at the oral cavity, with condition of strictly respect of surgical techniques steps and postoperative therapy.

Postoperative evolution has shown that pharyngeal mucosa has a great capacity for healing, practically in a few days is formed a scar that allows a good deglutition with disappearance of signs of vomituration or vomiting.

**References**

- 1. Back, L., Paloheimo, M., Ylikoski, J.**, Traditional tonsillectomy compared with bipolar radiofrequency thermal ablation tonsillectomy in adults, Arch Otolaryngol Head Neck Surg, 2001, 127, 1106-1112.
- 2. Cook, S.P.**, Tonsils and Tonsillitis, article in <http://kidshealth.org/parent/medical/ears/tonsil.html>, Date reviewed: April 2007.
- 3. Igna, C.**, 2005, Tehnici chirurgicale veterinare, Ed. Brumar, Timișoara
- 4. Shinhar, S., Scotch, B. M., Belenky, W., Madgy, D., Hauptert, M.**, Harmonic scalpel tonsillectomy versus hot electrocautery and cold dissection: An objective comparison, Ear, Nose & Throat Journal, 2004, 83, 10, 712-715.
- 5. Solares, C.A., Koempel, J.A., Hirose, K., Abelson, T.I., Reilly, J.S. Cook, S.P. et al.**, Safety and efficacy of powered intracapsular tonsillectomy in children: a multi-center retrospective case series, Int. J. Pediatr. Otorhinolaryngol. 2005, 69, 21–26.
- 6. Volk, M.S., Wang, Z., Pankratov, M.M., Perrault, D.F., Ingrams D.R., Shapshay S.M.**, Mucosal intact laser tonsillar ablation, Archives of Otolaryngology-head & Neck surgery, 1996, 122, 1355-1359.