

## FOCUS Limb Amputation in Rabbits

Common reasons for limb amputation include neoplasia and trauma. Studies in dogs and cats regarding outcomes cannot be extrapolated to rabbits because they have a hopping gait and different conformation. Medical records of 34 rabbits that had undergone pelvic limb ( $n = 28$ ) or thoracic limb ( $n = 6$ ) amputation were reviewed. Rabbits were hospitalized for a median time of 2 days (range, 1–9 days). Twenty-two rabbits experienced acute morbidity (eg, balance disorders [falling toward side of amputation, slipping], problems supporting weight, exacerbation of concurrent disease [eg, osteoarthritis]) and GI abnormalities (eg, ileus, decreased appetite, soft feces). Incisional problems (eg, infection, dehiscence) were also noted. Acute morbidity resolved in 17 of 22 rabbits. Thirty-two rabbits lived long enough to be evaluated for chronic morbidity (eg, difficulty ambulating, hygiene issues, cutaneous ulceration, chronic pain). The median survival of rabbits was 720 days (range, 4–3250 days). Six rabbits were euthanized because of complications, including ongoing difficulty in ambulation and pododermatitis. Ulcerative pododermatitis was a serious complication associated with limb amputation. Risk factors associated with death included age, weight, and concurrent medical problems.



### ■ Commentary

Limb amputations in rabbits can result in high client satisfaction and manageable complications if cases are selected carefully. Because most limb amputations are salvage procedures with euthanasia as the alternative, limb amputation should be considered a viable option even if chronic complications are expected. Complete staging should be performed when underlying neoplastic disease is present.—*Christoph Mans, Dr. med. vet.*

### ■ ■ Source

Outcome for client-owned domestic rabbits undergoing limb amputation: 34 cases (2000–2009). Northrup NC, Barron GHW, Aldridge CF, et al. *JAVMA* 244:950–955, 2014.

## Use of Implants to Treat Keratoconjunctivitis Sicca

Keratoconjunctivitis sicca (KCS) is a common ocular disease in dogs. Although the exact cause is unknown, underlying autoimmune disease is suspected. Topical cyclosporine A (CsA) is an effective treatment because it has immunomodulating and tear-stimulating properties. This retrospective study evaluated the effect of episcleral silicone matrix CsA implants in dogs with KCS. Eyes were divided into 2 groups: (1) good candidates (GC) with Schirmer tear test (STT) values  $>5$  but  $<10$  mm/min and (2) poor candidates (PC) with STT values  $<5$  mm/min and failure to respond to topical CsA or tacrolimus. Twenty-seven eyes from 15 dogs received implants (15 GC, 12 PC). Response was evaluated using STT values and clinical scoring (ie, ocular discharge, conjunctival hyperemia, corneal neovascularization, corneal opacity). Mean follow-up was  $18 \pm$

2 months for GC and  $10.4 \pm 15$  months for PC. Both groups experienced statistically significant increase in STT values over baseline, with maximum STT increase at 90 days; however, there was no significant improvement from baseline at 330 and 300 days for GC and PC, respectively. Significant improvement in clinical scores was noted from 60–90 days and remained significant up to 480–540 days postimplantation. The implants were well tolerated; however, implants were lost in 2 eyes at 12-month and 1-week follow-up, respectively.

### ■ Commentary

At this time, episcleral CsA implants are unlikely to become the recommended standard of care for most dogs with KCS because implantation requires general anesthesia, repeated implant placement is

expected, there is risk for implant extrusion, there is lack of a commercially available product, and there is general absence of prospective clinical studies. However, CsA-containing implantation may represent a potential future option for appropriate cases, improving patient care when topical treatment is not feasible. Finally, if affordable, safe, accessible implant devices that deliver a longer duration of medication are developed, this treatment may become appropriate for more dogs with KCS.—*Allyson Gosling, DVM*

### ■ ■ Source

Use of episcleral cyclosporine implants in dogs with keratoconjunctivitis sicca: A pilot study. Barachetti L, Rampazzo A, Mortellaro CM, et al. *VET OPHTHALMOL* doi: 10.1111/vop.12173.

MORE ►