

Nasolacrimal Duct Flushes in Rabbits

Anthony A. Pilny, DVM, DABVP (Avian)

*The Center for Avian and Exotic Medicine
New York, New York*

The nasolacrimal system of rabbits consists of a single punctum located in the ventral eyelid near the medial canthus (**FIGURE 1**). The lacrimal sac is rostral to the punctum and caudal to the nasolacrimal duct aperture. The duct extends from the orbit to the nasal fossa, exiting on the ventromedial aspect of the alar fold just caudal to the mucocutaneous junction of the nares.

- **The most common indication for nasolacrimal duct flushing is unilateral or bilateral epiphora secondary to an obstructed nasolacrimal duct (FIGURE 2).** Most of these rabbits present without other clinical signs and are healthy other than the ocular discharge. In other cases, the epiphora is secondary to infection (e.g., *Pasteurella multocida*), elongation of maxillary incisor or first premolar roots, or dental abscessation.

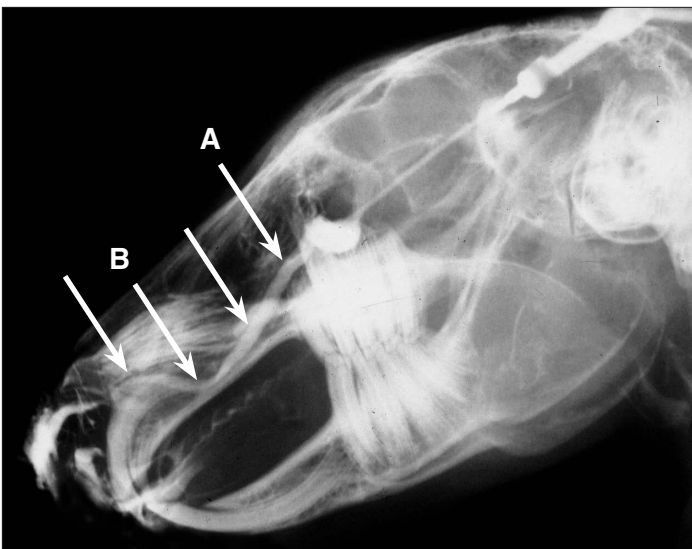


Figure 1. Injection of radiopaque dye (dilute iohexol) into the nasolacrimal punctum to show the normal anatomy (arrows). (A) Proximal maxillary bend. (B) Bend at the incisor tooth. (Note: Dye has spilled around the external nares.)

This article is based on an original article first published in the *Hartz Exotic Health Newsletter of Practical Medicine for Veterinary Professionals*, produced by Hartz Mountain Corporation.



Figure 2. Epiphora in a pet rabbit. Note the hair loss from chronic tearing. The condition resolved completely after appropriate nasolacrimal duct flushes.

- **Treatment of epiphora in rabbits involves irrigation of the nasolacrimal duct to restore patency.** After a topical anesthetic (e.g., proparacaine HCl 0.5%) has been instilled and proper restraint instituted, the lower eyelid can be abducted and the punctum identified. Although a lacrimal cannula can be used, a 22- or 24-gauge standard intravenous catheter works well and is most commonly used (**FIGURE 3**). In most cases, lubrication is not needed to insert the catheter. Magnification may help in identifying the punctum in smaller rabbits or those with conjunctivitis.
- **After the catheter is seated, saline is used to gently flush the duct until the fluid is dripping from the nares.** Typically, the flushed fluid contains an opaque, white, gritty material composed of pus, skin cells, and other debris. Several flushes may be needed, and slight back pressure can also help in stubborn cases. I generally use a 6-mL syringe.

- **Addition of antibiotics to the saline flush benefits patients with infections or dacrocystitis.** The choice of antibiotic may be guided by culture and sensitivity testing or a veterinary formulary; an injectable formulation should be used.
- **In some cases, a failed attempt to establish patency indicates that the rabbit should be rechecked and another attempt made in the next few days to a week.** In difficult cases, the eye can appear buphthalmic as a result of attempts to flush the nasolacrimal duct, but this condition typically resolves without complication. In some cases, kinking or bending of the catheter may affect flushing. Recurrence of some obstructions is common, and further flushes may be warranted. Culture of the irrigation fluid is of questionable diagnostic value but might help guide antimicrobial therapy if indicated.
- **Topical NSAIDs, such as 0.03% flurbiprofen, can help with any discomfort caused by the procedure.** These medications can be applied as eyedrops after the procedure. Attempts to identify the underlying cause(s) of nasolacrimal duct blockage, such as skull/dental radiography or computed tomography, and correction are essential to long-term management and overall health of these rabbits.



Figure 3. Placement of a 24-gauge intravenous catheter (needle removed) into the nasal punctum after topical anesthesia of the eye.