

Conjunctival Microflora in Relation to Conjunctivitis in Guinea Pigs

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In the Literature

Faghihi H, Rajaei SM, Ansari-Mood M, Azizi F. Conjunctival microflora in guinea pigs with and without signs of conjunctivitis. *J Exotic Pet Med.* 2019;30:65-68.

FROM THE PAGE ...

Anecdotal information suggests that guinea pigs have a high prevalence of ocular issues. Guinea pigs have prominent eyes, with eyelids open at birth, relatively small third eyelids, and low tear production, which can all predispose them to conditions that affect conjunctival and corneal health.

In this study, 9 clinically normal guinea pigs and 11 guinea pigs that had clinical conjunctivitis were examined and tested to evaluate their conjunctival microflora. Conjunctival swabs were obtained from both eyes of each guinea pig for bacterial culture and susceptibility testing. Culture results revealed bacterial growth in 77% of the clinically normal guinea pig eyes and in 72% of guinea pig eyes with clinical evidence of conjunctivitis.

In the clinically normal guinea pigs, the most common bacterial isolates were *Staphylococcus* spp, *Bacillus* spp, and *Streptococcus* spp, all of which have been reported as part of the normal microflora of guinea pig conjunctiva. Bacteria isolated from guinea pigs with signs of conjunctivitis consisted primarily of *Staphylococcus* spp, *Moraxella* spp, *Clostridium* spp, *Listeria* spp, and *Streptococcus* spp. Most of the isolated bacteria were sensitive to common antibiotics used in guinea pigs (eg, enrofloxacin, doxycy-

cline, vancomycin). No significant difference between groups was found in the number of isolated *Staphylococcus* spp and *Streptococcus* spp. One limitation of this study was the use of a general bacterial susceptibility panel; use of an ophthalmologic susceptibility panel would have been preferable.

... TO YOUR PATIENTS

Key pearls to put into practice:

- 1** A sterile microswab sample of the cornea and mucosal surface of the lower conjunctival fornix for culture and susceptibility testing is sufficient for determining the bacterial flora of a guinea pig with conjunctivitis.
- 2** When bacterial culture and susceptibility testing is requested for a guinea pig, the clinician should request an ophthalmologic susceptibility panel from the laboratory rather than a general antimicrobial susceptibility panel.
- 3** Bacterial growth from a conjunctival swab in a guinea pig does not automatically equate to a diagnosis of bacterial conjunctivitis. Healthy guinea pigs without clinical signs of conjunctivitis also have the potential for positive bacterial cultures.
- 4** Although pathogenic bacterial infection is a common cause of conjunctivitis in guinea pigs, infectious agents are not the only cause; vitamin C deficiency can also result in conjunctivitis in these patients. The clinician should consider all potential etiologies when diagnosing a patient.