Corneal lipidosis or dystrophy in rabbits

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Caution: this file contains pictures that may be distressing for some persons.

Corneal lipidosis, also called corneal dystrophy or lipid keratopathy, is a condition where fat (usually cholesterol) or minerals (calcium) is deposited under the surface of the cornea.

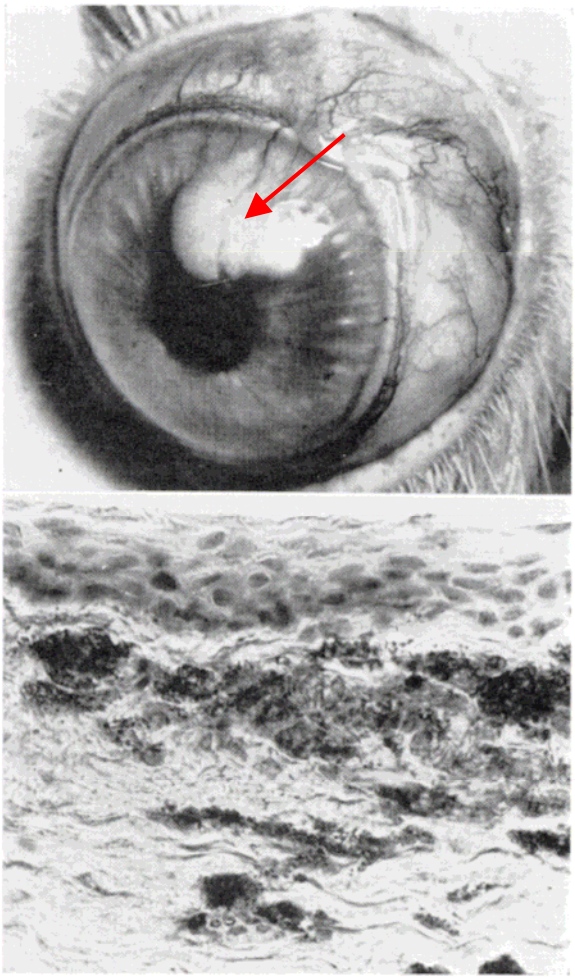

FIG. 5 *Top.* Lipid plaque in hypercholesteremic rabbit cornea occurring at site of vascularity. Cornea had been cauterized several times by heated probe.

FIG. 6 *Bottom.* Sections of rabbit cornea in region of plaque, stained with hematoxylin-Sudan. Noteworthy is abundance of intracellular globular lipid and relatively slight amount of granular sudanophilia.

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The infiltration usually starts at the edge of the cornea and can be observed in the anterior stroma, the epithelial basement membrane and the epithelium.

Corneal lipidosis is not associated to a disease; it is not breed dependent, and not gender dependent.

Causes

Diet or trauma are primary causes for lipip deposits into the cornea, but congenital inheritance is not ruled out.

Diagnosis

It is based on a complete ophthalmic examination and a discussion with the owner about the food fed to the rabbit.

Usually, both eyes are affected (bilateral), although unilateral lipidosis has been observed. The fat deposit

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presents variations in its thickness, they can be subtle and pale, or bright white, silver or grey colored. Usually they are raised and vascularisation is observed in the affected part of the cornea. Often it is accompanied by macrophage invasion. An inflammatory process has been observed, but does not always seem to be present.

Unlike in dogs, corneal lipidosis is associated to loss of vision in rabbits.

There is no pain associated to this condition.

Treatment

There is no medical therapy available, other than bring modification to the diet.

Further information

1. **Fallon MT, Reinhard MK, DaRif CA, Schoeb TR. Diagnostic exercise: eye lesions in a rabbit. Lab Anim Sci. 1988; 38:612-3.**
2. **Garibaldi BA, Goad ME. Lipid keratopathy in the Watanabe (WHHL) rabbit. Vet Pathol. 1988; 25:173-4.**
3. **Gwin RM, Gelatt KN. Bilateral ocular lipidosis in a cottontail rabbit fed an all-milk diet. J Am Vet Med Assoc. 1977; 171:887-9.**
4. **Hillyer E.V., Quesenberry K.E., Ferrets, Rabbits, and Rodents: Clinical Medicine and Surgery, New York: WB Saunders Co., 1997, p. 339-345.**
5. **Sebesteny A, Sheraidah GA, Trevan DJ, Alexander RA, Ahmed AI. Lipid keratopathy and atheromatosis in an SPF laboratory rabbit colony attributable to diet. Lab Anim. 1985; 19:180-8.**
6. **Stock EL, Mendelsohn AD, Lo GG, Ghosh S, O'Grady RB. Lipid keratopathy in rabbits. An animal model system. Arch Ophthalmol. 1985 May;103(5):726-30.**

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