

Brief Communication

CATARACT AND IRIDOCYCLITIS IN MINK

Ocular lesions are seldom observed in mink (*Løfliger 1970*). The intention of this communication is to report briefly on the occurrence of cataract and iridocyclitis in a comparatively large number of mink in a district in northern Norway; the total number of affected animals is not known, however, since the disease occurred over several years as scattered cases in several farms receiving food from a central feed plant. The ocular lesions, with varying degrees of opacity of the lens (Fig. 1), were sometimes unilateral, although bilateral involvement was not uncommon; the entity did not seem to be congenital and occurred in individuals of different colour phases, both sexes and various ages. The disease seemed to progress quite slowly, over several months. Severely affected animals appeared to be blind.

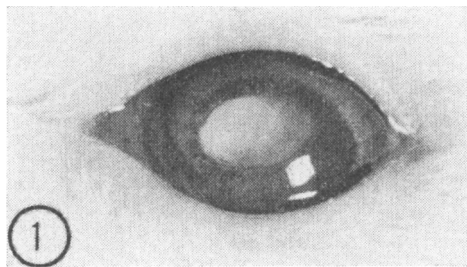


Figure 1. Lenticular opacity in a pearl mink.

The feed produced at the central feed plant did not differ much from that used in other districts in Norway (ingredients: fish products, slaughter offal, blood, carbohydrates, fat, vitamin mixture); supplementation of large doses of vitamins did not seem to influence the course of the disease. The water included in the feed was of poor bacteriological quality and had a remarkably high content of sodium chloride (165 mg/l). It was not ascertained whether this was due to admixture of sea-water or to other contamination. One farm used the same water source as drinking water, and this farm had 23 instances of ocular lesions in female breeders, in 1 season, among a total of 640 mated

females. There was a high incidence of plasmacytosis, as judged by the IAT test, and the mink did not reproduce satisfactorily, but the health situation at the farm was otherwise good.

Five affected animals, 4 females and 1 male, from this farm were placed among other mink at the Research Station for Fur-Bearing Animals, Heggedal, in January. All attempts to mate them were unsuccessful; 1 of the females died during the following summer, from advanced plasmacytosis, while the remaining animals were killed at various ages, the last one 3 years later. Microscopic examination of the eyes revealed advanced lenticular degeneration and deformation, with massive calcium deposits (Figs. 2, 3); microorganisms were not detected in sections

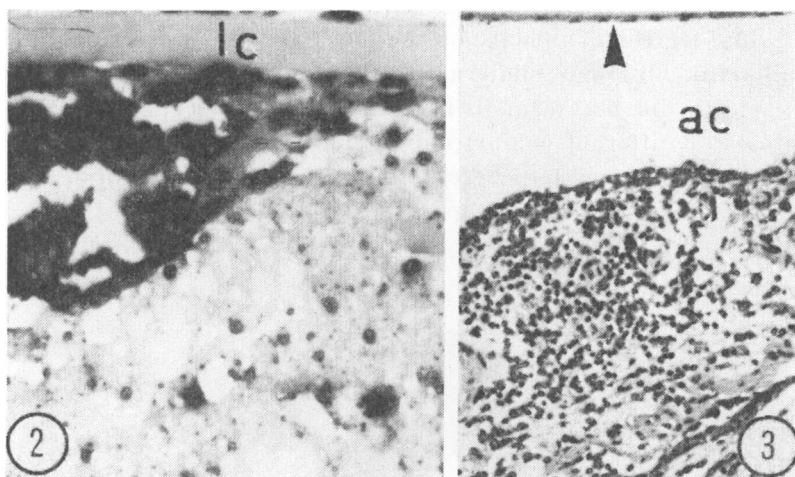


Figure 2. Part of a cataractous lens with massive calcifications; lc indicates lenticular capsule. Staining: haematoxylin and eosin, $\times 300$.

Figure 3. Detail of inflamed and thickened iris; ac is anterior chamber; arrow indicates endothelium of the posterior surface of cornea. Staining: haematoxylin and eosin, $\times 180$.

stained with Gram, Methylene blue or PAS. Bilateral iridocyclitic lesions were also observed, the infiltrating cells being predominantly mononuclear cells, with a preponderance of plasma cells. Some eyes also had anterior synechia and/or incipient infiltration of mononuclear inflammatory cells in the retina and optic nerve.

The aetiological background remains unknown. Equivalent ocular lesions have not, as far as we know, been described in mink. There was no spread of the disease at the Research Station,

which indicates that the condition was not contagious. Hereditary factors cannot be excluded, while an association with diabetes mellitus seems unlikely; no available information suggests any interrelationship between plasmacytosis and eye changes of this type. Cataract may be related to certain deficiencies and exposure to a wide variety of toxic substances (*Jubb & Kennedy 1970, Kronevi et al. 1977*), and it seems probable that the described ocular lesions were attributable to some, as yet, unknown environmental conditions, possibly toxic agents in the water.

A. Helgebostad

The Department of Husbandry and Genetics, Research Station for Fur-Bearing Animals, Heggedal,

K. Nordstoga and I. Nafstad

The Veterinary College of Norway, Oslo.

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(Received February 28, 1979).

Reprints may be requested from: A. Helgebostad, the Research Station for Fur-Bearing Animals, 1380 Heggedal, Norway.