Ocular dermoid in dairy cattle - 12 years survey

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SUMMARY
Four different forms of ocular dermoid in dairy cattle herds are reported. The incidence is estimated by 0.002%. This congenital anomaly seems not to be inherited, but it may appear with other congenital eye defects or with other malformations.

KEY-WORDS : dermoid - dairy cattle - eye.

Introduction
Ocular dermoid is a skin or skin-like appendage usually arising on the limbus, conjunctivae, and cornea [3]. It can be unilateral or bilateral and may be associated with other ocular manifestation [7], or with other malformations [5]. Hair from the lesions is predominantly responsible for the associated irritation resulting in chronic inflammation of the conjunctivae and cornea [3], and may cause visual impairment.

Being a congenital anomaly, dermoid was recorded in different cattle breed [2,4,6]. However, it is believed not to be inherited [2].

In the communication we describe various forms of dermoid that occurred in dairy cattle herds in Israel during 12 years survey.

Case reports
Field observations were carried out in six dairy cattle herds (Israeli-Holstein breed). The herds each comprised 220 to 300 lactating cows. All herds were kept in a loose-housing system in completely open barns all the year round. The calves were removed from their dam immediately after birth and were kept in plastic cages for four weeks. Each day, a pen rider visually examined the animals, and sick animals were presented to the attending veterinarian.

During this survey five animals were found to be affected and the incidence was estimated to be 0.002%.

The following four forms were found:
1. Corneal dermoid (Fig. 1),
2. Corneoscleral dermoid (Fig. 2),
3. Corneconjunctival dermoid (Fig. 3),
4. Corneal dermoid (Fig. 4),
5. Corneoscleral dermoid (Fig. 5).
4. Conjunctival dermoid (Fig. 4).

Four out of five cases were unilateral, and only one (Case No. 2) was bilateral associated with additional congenital malformations; hydrocephalus externus and corneal opacity. This calf was born dead, while the other twin was born alive without any malformations.

In all described cases ocular irritation, mild blepharospasm and epiphora were evident. Treatment consists of a superficial keratectomy, usually at an age of 3 months after regional and local anesthesia, which was injected retrobulbar. The dermoid on the conjunctivae was easily surgically removed from the underlying tissue. A full thickness wedge resection of the involved conjunctiva was performed. Topical antibiotics—cloxacillin benzathine (Opticlox Eye Ointment® Norbrook, laboratories, Newry, Ireland) were instilled once daily for 5 days.

Histologically, ocular dermoids contained keratinized squamous epithelial cells, hair follicles and sweat glands.

Discussion

According to our findings it was evident that ocular dermoid occurred rarely in newborn calves. Seldom it was associated with other congenital eye defects like corneal opacity which have been described in Holsteins as recessive condition [1].

Ocular dermoids have not been demonstrated to be inherited in bovine, nevertheless their occurrence are recommended to be duly noted in breeding herds and affected animals should be treated.

References