Apparent idiopathic interface disease in a Boer billy goat

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ABSTRACT
An apparently idiopathic interface disease in a 2-year-old Boer billy goat is described. Clinical features of the disease were the presence of a pruritic multiple focally disseminated dermatitis with flat-topped, angular, scaly plaques and papules with corrugated surfaces in the skin of virtually the entire body. The aetiology of the disorder in the described case is unknown.

Key words: goat, interface disease.


Lichenoid dermatitis (or interface diseases) is characterised by flat-topped papules, which are angular or polygonal with thin, shiny scales1,2. It may be pruritic or non-pruritic4. Lichenoid tissue reactions are characterised by epidermal basal cell damage that may take the form of cell death or vacuolar change (hydropic degeneration). Cell death usually involves single scattered basal cells that are shrunkken and have an eosinophilic cytoplasm, often containing one or more pyknotic nuclear fragments (apoptotic bodies)4,5,2. The cause and pathogenesis of lichenoid dermatoses is unclear; their clinical and histopathological features suggest an immune-mediated pathomechanism5.

In this communication we describe hitherto unrecorded clinical and pathological findings of an apparently idiopathic interface disease in a 2-year-old Boer billy goat.

The billy goat had a history of multifocal skin lesions (10–20 mm in diameter) consisting of papules and plaques with raised, thickened, roughened surfaces with scale formation of 3-month duration. The lesions were on the back, abdomen, inguinal area, perineum, head, tail, scrotum, the inner aspects of both pinnae and the limbs (Figs 1, 2). These papular lesions were particularly prominent and coalesced to form plaques on the head, face and ears (Fig. 2). There was fissuring of the lesions over the ears, lip margins and tail. The diagnosis was a generalised pruritic papulosquamous-crustous dermatitis.

The animal had normal rectal temperature, pulse and respiratory rates. Additional physical findings included pre-femoral, prescapular and submandibular lymphadenopathy. The animal had no evidence of systemic illness. Skin scrapings and hairs were examined microscopically for the presence of ectoparasites and dermatophytes, with negative results. A dermatophyte culture was taken and was also negative. A haemogram revealed neutrophilic leucocytosis and slight eosinophilia (0.9 × 10\(^3\), normal range 0.05 to 0.65 × 10\(^3\)). No immunofluorescence test was performed. Skin biopsies for histopathological examination were taken from lesions in the skin of the ears, lip, inguinal area, abdomen and back. They revealed the presence of an ortho-keratotic hyperkeratosis (Fig. 3). Irregular and papilated epidermal hyperplasia and multifocal epidermal microabscesses were also present (Fig. 4). Vacuolar alteration of basal cells and the basement membrane was rarely observed. Shrunkken basal cells with eosinophilic cytoplasm and pyknotic nuclei were noticed in the basal layer of the epidermis. In some areas, perivascular accumulations of mononuclear inflammatory cells were present.

Fig. 1: Multiple prominent papules and plaques on the face and ears.

Fig. 2: Multifocal skin lesions consisting of papules and plaques with raised, thickened, roughened surface with scale formation.
present in the superficial dermis. Occa-
sional apoptotic epidermal cells and
macrophages containing melanocytic
granules were also detected. At the
owner’s request euthanasia was per-
formed and the animal was necropsied
but, apart from the skin lesions, no patho-
logical or histological changes were
found. A presumptive diagnosis of inter-
face disease was made. This was based on
history, clinical presentation and charac-
teristic micro-and macroscopic pathology
that revealed lichenoid features, and on
the results of nonspecific laboratory tests.
Differential diagnoses included goat pox,
orf, dermatophytosis and various granu-
lomatous and neoplastic conditions (e.g.
papillomatosis).

This is the first report of an apparently
idiopathic interface disease in the goat.
The clinical and pathological features
were characterised by a focal disseminate
pruritic dermatitis manifesting as flat-
topped, angular, scaly plaques and
papules with corrugated surfaces in the
skin of virtually the entire body. Similar
skin lesions have also been reported in
dogs and cats [2,5,6]. In dogs, cats and
humans, interface disease or lichenoid
dermatitis has a self-limiting course in
which spontaneous resolution occurs
within 6 months to 2 years [2,5,6]. Esosin-
ophilia, such as was seen in the present
case, has been reported in a cat suffering
from interface disease [2], but eosinophilia is
not commonly reported in association
with canine interface disease. The aetiol-
ogy of the disorder in the described case is
unknown. The present information may
be helpful to goat practitioners as a differ-
ential diagnosis of various skin diseases.

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