Papillary Cystadenoma of the Sweat Gland (Hidradenoma) in a Ewe

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Introduction

Sweat glands are tubular coiled glands distributed widely in the skin. They are lined by cuboidal or pyramidal epithelium with myoepithelial cells located between the secretory cells and basement membrane. They are most active in horses and least active in goats and cats (1). Tumours arising from.sweat glands have been first decribed in humans in 1859 while in animals, the first case was described in a dog in 1906 (2). Subsequently, substantial information about these tumours has accumulated. The tumours are more frequent in dogs, few in cats and rare in other animals; only one case being reported in a bull (3,4,5,6).

The following communication describes a sweat 'gland papillary cystadenoma in a ewe in Saudi Arabia.

Case History

A female Awasi ewe, about 3 years old, was presented to the Veterinary Teaching Hospital, King Faisal University with two subcutaneous masses. The first mass (17 x 12 cm) was located on the left side of the chest dorsal to the sternum while the second (14 x 10 cm) was situated in the perineal regions, dorsal to the udder (Fig. 1). The swellings had irregular contours, lobulated, soft and loosely adherent to the healthy skin. According to the owner, the cysts developed slowly to their present size over a period of several months. The animal was in a fair nutritional condition.

Surgery

The animal was anaesthetized with Xylazine (2% Rompun Bayer , Germany) / Ketamine hydrochloride (Kitamidor, Richter Pharma, GesmbH & CoKG Weis) mixture given intravenously at the dose of 0.1 mg/KBW and 5 mg/KBW respectively. The masses were carefully removed from the

loose subcutaneous tissue with liberal amount of skin. The skin was coaptated with non-abosrbable suture. The animal made uneventful recovery and the sutures were removed 10 days later.

Tissue samples from the excised masses were fixed in 10% formalin, processed in paraffin and 4-6 µm sections were cut and stained with haematoxylin and eosin (H&E). Additional specimens were referred to parasitology laboratory .

Results

Both masses were lobulated and composed of multiple cysts held together by penetrating connective tissue cords, with no distinct capsule formation. The cut surface revealed acinous cavities of various sizes, with larger ones showing inward extensions, and sometimes occupied by dirty yellowish mucoid secretion. At histopathology, cystic, tubular and papillary structures were seen lined by cuboidal or columnar epithelium and separated by variable amount of connective tissue. Focal proliferation and hypertrophy of the lining cells were observed with formation of luminal papillary projections .Occasionally, hypertropied cells had vesiculated nuclei and foamy cytoplasm. Mitotic activity was not a feature. Small cells with rod-shaped nuclei (Myoepithelial cells) were seen close to the lining cells. Desquamated cells, neutrophils and eosinophilic secretion were also noticed in the lumen of some acini. Hemosiderin-laden macrophages were detected in one section (Fig. 2-4). parasitic infection was excluded.

Discussion

The case described here appears to be the first reported in sheep. The gross and histopathological appearances of the subcutaneous masses greatly resemble those of sweat gland adenomas in man (7,8) and animals (3,5,6). In animals, these tumours have been reported to arise as subcutaneous, multilobualr, soft structures mostly in the head and neck region, back, flank, perineum and less frequently in the legs, and may attain large size of up to 10 cm in diameter. Most of these tumours are indolent and benign and can be excised surgically with favorable prognosis (5,2).

The variation in size and shape of the histological structures of the masses, their separation by connective tissue and the presence of luminal papillary projections indicate that the lesion is more a tumour than mere hyperplasia. The histological features are also different from sebaceous adenomas which are primarily composed of active mitotic cells closely simulating the normal gland (8).

Histopathologically, characteristics of malignancy could not be ascertained and thus the condition has been diagnosed as a sweat gland papillary cystadenoma (Hidradenoma).

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Fig.l. A sheep showing lobulated masses on the side of the sternum and the perineal region.

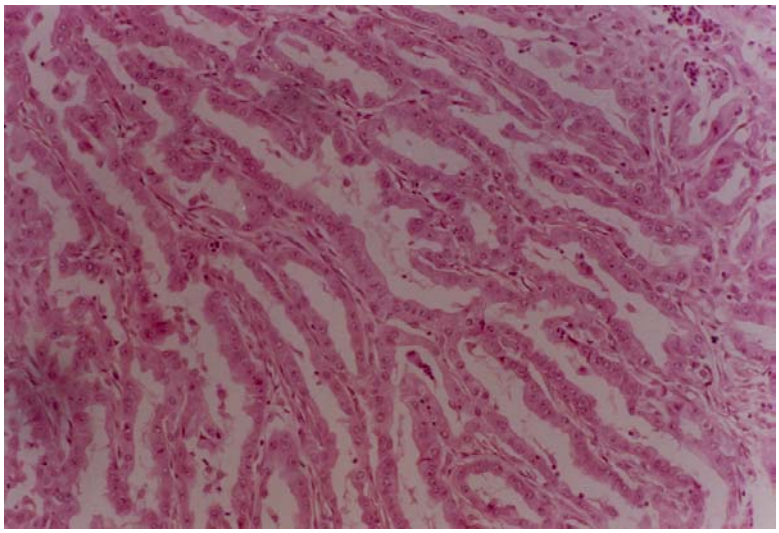

Fig.2. Dilated tubular structures lined by cuboidal epithelium HE x 100.

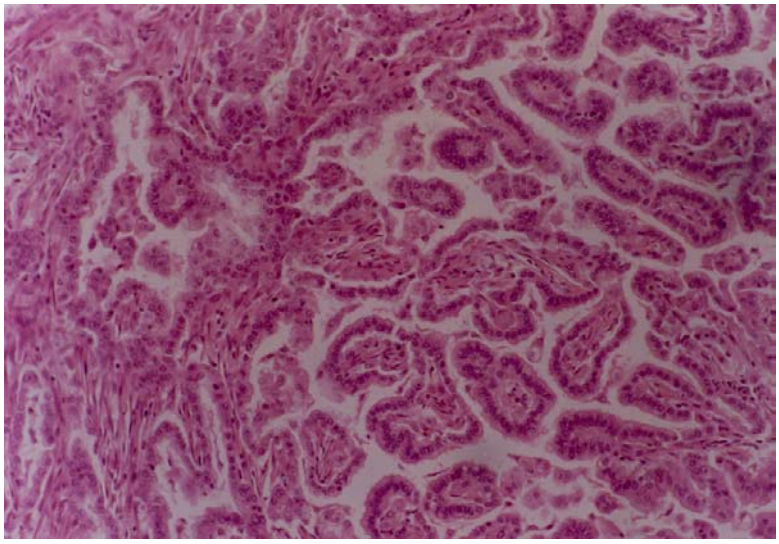

Fig.3. Cystic and tubular structures lined by cuboidal or low columnar epithelium. Note intraductal growth. HE x 100.

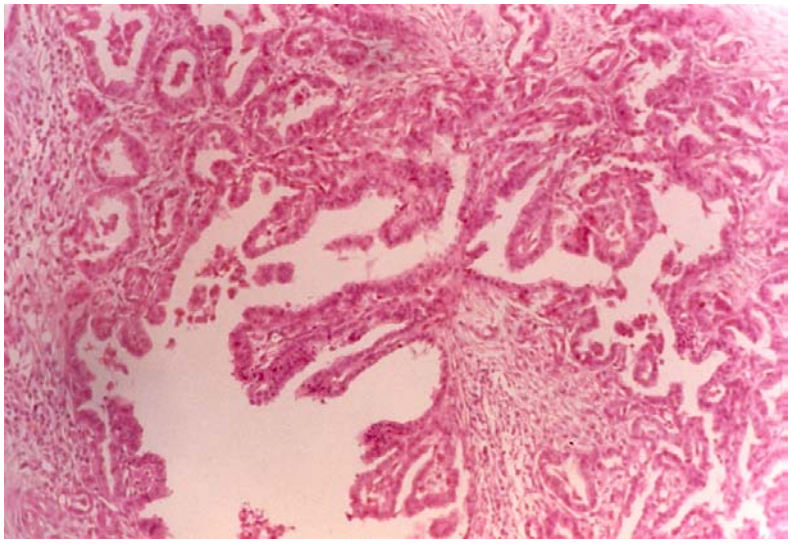

Fig.4. Cystic structures with papillary proliferation. HE x 60.

ورم غدي عرقي متحوصل في نعجة

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الملخص :

تم استئصال ورمين من تحت الجلد من نعجة، أظهر الفحص المجهري وجود بنيات حوصلية أو ا نبوبية أو حلمية مبطنة بخلايا مكعباتية أو عمودية يفصل بينهما نسيج ليفي ضمام، وقد شخصت الحالة كورم غدي عرقي متحوصل.