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## The effects of sex and breeding season on morphological and histological structure of the interdigital gland in Awassi sheep (*Ovis aries*)

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**Aim:** The aim of this study was to investigate the effect of sex and breeding season on morphological and histological structure of the interdigital gland in Awassi sheep (*Ovis aries*).

**Materials & Methods:** Fore and hind limbs were collected from 10 males and females both in breeding (June-July) and non-breeding (November-December) seasons. Location and shape of the glands were detected radiologically. Weights and size of the glands were measured by calliper. Histological structure of the glands was assessed by Hematoxyline-Eosine staining.

**Results:** The glands were found to localize at the level between of 1<sup>st</sup> and 2<sup>nd</sup> phalanxes and present on all limbs. The glands resembled to a tobacco pipe consisted of a wide corpus, a thin neck having a hole at proximal tip and a bend linking these two structures. Mean weight of the glands was found to be  $1.03 \pm 0.31$  g. Mean corpus length, corpus thickness, ductus length and ductus diameter was  $17.42 \pm 23$  mm,  $12 \pm 0.85$  mm,  $26.81 \pm 0.31$  mm and  $4.65 \pm 0.50$  mm, respectively. All parameters of males showed higher values than females. In the breeding season, animals were generally showed higher value than the animals in the non-breeding season. By histologically examination gland secrets of pink color and necrotic cell debris was observed in gland lumen. Epidermis was covered with multilayer keratinized flat epitelyum. Hair follicles scatterd in loose connective tissue sebaceous as well as apocrine sweat glands and arrector pili muscles were present in dermis. Fibrous capsule around the gland was composed of a dense connective tissue and collagen and comprised blood vessels, nerves and fat cells.

**Conclusion:** Morphometrical and histological data obtained in this study indicated that structure of interdigital glands in Awassi sheep was similar to that in other sheep breeds. The results also suggested that this gland may play a role in sexual communication in sheep.

### Biography

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