

LC009-Poster

Histomorphologic Study of Ovine Hoof

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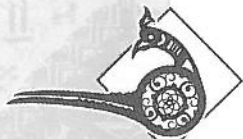
Hooves are the main part in weight bearing structures of ungulates. Anatomic and histologic structures of the hooves in horses and cows showed its laminar structure. Interdigitations of dermal and epidermal laminae make hooves stable. Different layers of epidermis from stratum basale to stratum corneum were recorded in hoof histology. In horses laminar layer divided to primary and secondary laminae but in cows presence of just primary laminae were reported. Arteriovenous shunts were reported in both species as a possible base for pathogenesis of laminitis.

Laminitis is a common sequel of grain overload in horse and cow that result from necrosis of the laminar layer. Regarding to lack of reported data on histology of the ovine foot, this current study were done to determine normal histologic structures of the ovine foot as a basis for further experiments.

Limbs of five slaughtered sheep were transferred to veterinary college and its right, left, fore and hindlimbs were marked. All limbs evaluated for possible injuries before study and just sound limbs were selected. A histologic specimen was taken from the toe region of each digit. All samples were transferred in 10% formaline and after washing transferred to 20% formaline. After two weeks histopathological slides with 5 μ m thickness were prepared and stained by H&E technique. All data were measured in the toe and lateral wall of the toe region.

Number of laminae in the toe and lateral wall region recorded as $(25.41 \pm 8.07$ & $20.07 \pm 3.7)$ in a centimeter length of the hoof respectively. Thickness of the laminae in the toe and lateral wall regions recorded as $(0.24 \pm 0.046$ & 0.28 ± 0.063 mm) respectively and length of the laminae in toe and lateral wall region recorded as $(4.54 \pm 2.15$ & 3.47 ± 1.63 mm) respectively.

Key words: Histomorphologic, Hoof, Ovine



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