Anatomic Study of Digital Cushion in Sheep

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Digital cushions are some internal structure of hooves that play a major role in animal weight bearing, shock-absorbing, and stimulating blood circulation in digits. The structure of digital cushions has been studied in cows and some other animal species. In this current study regarding to the importance of digital cushions in pathogenesis of hoof injuries, its anatomic structures in sheep were studied.

Limbs of 5 slaughtered mature female sheep were transferred to the veterinary college. Fore, hind, right and left limbs were determined and by direct heating the horny covering of the hooves were removed. Length and width of digital cushion and its anatomic origins and insertions were studied. Sheep have the lateral, medial and central cushions just like cows. Length of lateral digital cushions (38.68 ± 5.3) was more than medial (38.1 ± 5.20) and central (28.65 ± 3.4) ones. The length of lateral cushion in forelimbs (39.91 ± 5.65) was more compared to the one in hind limbs (37.42 ± 4.60). Central cushions were recorded as the smallest cushions (28.65 ± 3.8). Lateral and medial digital cushions extended from the heel bulb to the tip of the third phalanx.

Lateral and medial digital cushion widths were recorded as (0.62 ± 0.84) and (0.53 ± 0.13) respectively which were more in forelimbs. Although some differences in weight bearing pattern of the hooves between cows and sheep were reported, it seems that the structure of digital cushions in sheep is similar to cow.

Key words: Digital Cushion, Sheep