

Anatomical study of nasal cavity and surrounding sinuses in Sangsari sheep through CT scan images

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Abstract

Modern diagnostic imaging techniques make it possible to obtain an accurate picture of the organs and the position of the structures in different sections and angles. Due to the lack of specialized information about the nasal cavity and paranasal sinuses in Iranian sheep, this study was designed to assess normal morphology and position of these structures through CT scan images. The findings of the present study may help assess the injuries of the nasal cavity and sinuses and perform surgeries such as herniation and sinoscopy. To conduct this study, the heads of 8 male sheep that were healthy in the initial clinical examination were used. Images were taken from longitudinal and transverse sections, and in most cases, the images were taken perpendicular to the palatine bone. Cheek teeth were also considered as an image position guide. This study found that in Sangsari sheep, the maxillary, palatine, frontal, and lacrimal are the sinuses around the nasal cavity. The extent of each of them has been investigated in this study. Also, the position and shape of the nasal conchae and meatuses were studied. The results of this study showed that the nasal cavity is more expansive in sheep than other ruminants. The extent and position of the paranasal sinuses follow their general shape and pattern in other ruminants and other breeds of sheep. CT scan provides a comprehensive picture of the components of the structures in the head, especially the nasal cavity and paranasal sinuses in sheep. It is a suitable method for diagnosing various types of neoplasms, trauma, infectious and non-infectious inflammatory diseases in this area.

Key words: Anatomy, CT Scan, Sheep, Nasal cavity, Sinus

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