

A comparative macroscopic study on the spleen of Musk deer (*Moschus moschiferus*) and Goat (*Capra hircus*)

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Introduction

Spleen plays a vital role during embryonic life in the production of erythrocytes, in adult, the production of lymphocytes and later the destruction of erythrocytes and storage of iron hemosiderin. It performs an important role in the reticuloendothelial system. Gross anatomy of spleen of domestic animals has been reported (Dyce *et al.*, 1996; Sisson, 1975; Nickel *et al.*, 1979). Meagre information is available on the gross anatomical aspects of spleen of wild animals; therefore the present work was conducted to document comparative gross anatomical features of the spleen of musk deer and goat.

Materials and Methods

Spleen of four adult musk deer of either sex brought for post mortem examination by the Wildlife Department at the Faculty of Veterinary Sciences and Animal Husbandry, Shuhama were utilized for the present study. Six adult goat spleens collected from local slaughter houses were used for comparison. The specimens were preserved in 10% formalin.

Results and Discussion

Spleen of musk deer was located between the dorsal sac of rumen and diaphragm adjacent to the vertebral column in the region of the tenth to the thirteenth rib. It was reddish brown in colour, compact oval in shape with well marked pointed ventral extremity (Image 1^w), whereas it was rectangular in goat (Image 3^w) and triangular in sheep (Sisson, 1975; Nickel *et al.*, 1979; Baba and Khan, 2001). The average weight was 50-55gms in musk deer and it was approximately 65-70gms in goat. The length of spleen in musk deer was 9.5-10.5cm from dorsal to ventral extremity and in goat 9.4-12.4cm. It was 6.0-6.5cm wide at the broadest point in musk deer and in goat 6.5-7.0cm. The thickness of spleen at the thickest point at cranial border was 2.5cm. Spleen was well marked by two surfaces, two borders and two extremities. Parietal surface was dome shaped, convex and lying against diaphragm (Image 1^w). Visceral surface was more deep, concave and was firmly attached to the rumen, (Image 2^w). Well marked borders were sharp, cranial border being thickest irregular ventrally whereas dorsally it was more uniform. Caudal border was thin concave towards the end of the dorsal extremity and convex ventrally. Dorsal extremity was thick and convex while the ventral was pointed and blunt.

Hilus was present on the visceral surface at the centre marked by splenic artery, vein and nerve (Image 2^w). In goat it was close to the dorsal end of the cranial border (Image 3^w). Spleen was firmly fixed in position by phrenicosplenic ligament, the peritoneal reflection from the parietal surface of spleen to the diaphragm and the reflection from the visceral surface to the rumen was the gastrosplenic ligament.

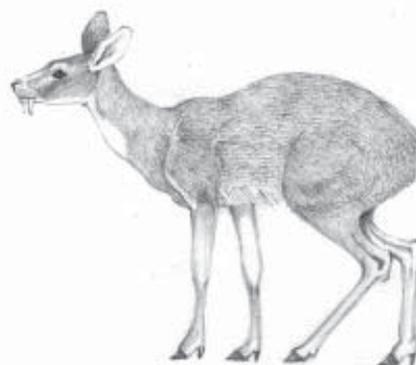
Thus the present work suggests that it was difficult to distinguish with certainty among the spleens of these animals grossly except shape and macro metric observations.

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^w see images in the web supplement at www.zoosprint.org

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