SUMMARY

The present study was planned on 8 adult healthy camels to record gross anatomy, histomorphology and micrometry of various components of the spleen. The spleen of camel was situated in the left dorsal part of the abdominal cavity extending obliquely from the posterior border of third lumbar transverse process to anterior border of the seventh lumbar transverse process. The anterior most part of spleen was firmly attached to dorsocaudal part of rumen by a small triangular area through gastrosplenic ligament. The crescent shaped spleen presented a head, a body and a tail with an average weight and volume of 365 gm and 470 ml, respectively. However, the average length and width were 45 cm and 14 cm at the widest part of the spleen.

It was dark greyish coloured and hard in consistency indicating the large amount of interlobular connective tissue. The hilus was a depression, where the blood vessels were placed quite well apart from each other. The splenic branch of the hepatic artery ran along the visceral surface to enter the hilus of the organ about the middle of its medial border. The splenic artery before entering the hilus bifurcated into cranial and caudal primary branches. Both the primary branches were supplying the caudal two-third part of the spleen. The cranial part was supplied by the splenic branch of right ruminal artery. The several secondary branches emerged from the

primary branches, which led to tertiary and several finer branches. Both of the primary branches supplied a particular segment of the spleen without any anastomosis.

The capsule of the spleen was lined with an outer layer of mesothelial cells. The smooth muscle fibres were arranged in three layers along with collagen, reticular and elastic fibres. These fibres were oriented along the longitudinal axis of capsule and later these constituted the trabeculae. The white pulp of the spleen was a lymphoreticular tissue consisting of lymphocytes, plasma cells and macrophages surrounding the major arterial blood vessels. The lymphatic tissue was either arranged as splenic nodules or periarterial lymphatic sheath. The isolated nodules were mainly scattered singly in the splenic parenchyma having a fine meshwork of reticular connective tissue containing mainly lymphocytes of various sizes. These fibres were concentrically arranged in the marginal zone with a sparse distribution in the central part of white pulp. Small vacuolated areas were observed inbetween the aggregations of lymphocytes being occupied by erythrocytes and hemosiderin pigment. Eccentrically located nodular arteries were generally divided into two to three branches. The different layers of nodular artery were moderately PAS positive. The statistical values for mean diameter of splenic nodule, mean diameter of smallest and largest follicles were308.26. 188.23 and 420.13 µm, respectively.

A maximum portion of splenic parenchyma was constituted by the red pulp (73.13 to 80.13%) having pulp arterioles, sheathed capillaries,

terminal capillaries, splenic sinuses and splenic cords. A meshwork of reticular fibres was observed throughout the red pulp. The splenic cords of varying thickness contained numerous erythrocytes, reticular cells, plasma cells, macrophages, lymphocytes , other leucocytic and phagocytic cells. Small groups of isolated smooth muscle fibres were oriented in varing directions. The splenic sinuses in the form of elongated, slit like vascular channels were mainly present along the longitudinal axis of the trabeculae just adjacent to red pulp. However, their dimensions were reduced in the red pulp. The sinuses were lined with elongated reticuloendothelial cells. The penicillar artery divided in the red pulp and formed the sheathed capillaries with the characteristic thickening of their walls. There was a significant correlation between the capsule and trabecular thickness, mean diameter of Malpighian follicle, diameter of smallest and largest follicle, number of Malpighian follicle per cm^2 area and different per cent areas of splenic parenchyma.