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## Comparative histoanatomical study on the normal adrenal gland of sheep and goat

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**Introduction:** The adrenal gland is a vitally important endocrine gland that occupies a central role in the regulatory mechanisms of the body metabolism. Environmental stress factors lead to permanent strain and overload of the body resulting in structural alterations of the adrenals that in turn are followed by hormonal imbalances. This leads to an increased susceptibility to bacterial and viral diseases.

**Materials and Methods:** This research was performed on hundred pairs of normal adrenal glands of sheep and goat (each one 50 pair) in age 6 month to 1 year and 1 – 1.5 year. After collecting the glands and weighting them, some parameters such as: length, wide and thickness of left and right side by caliper device were measured. For histological studies, after tissue preparation and staining with H&E, cortical zones and medullae of glands were recognized and the size of zones with micrometry method were determined. At result, data between left and right adrenal glands and two ages were analyzed and compared by t- student test.

**Results and discussion:** The result showed that, left adrenal was bean shape in two animals and right adrenal had irregular shape. There was significant difference between dimensions of left and right adrenal glands. The mean weight and length of left adrenal gland was greater than right in two animals. Also in aged 6 month to 1 year there was significant difference ( $P < 0.05$ ) between mean length and wide of right adrenal glands in two animals. Length in sheep and wide in goat were more. Also the thickness and wide of left adrenal gland in sheep were larger than goat and the difference was significant ( $P < 0.05$ ). Histological studies revealed that, there was significant difference in size of capsule and adrenal medulla in two animals and