

A HISTOCHEMICAL AND IMMUNOHISTOCHEMICAL STUDY ON THE THYROID GLAND OF DROMEDARY CAMEL (*Camelus dromedarius*)

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ABSTRACT

The present study was designed to provide the histochemical and immunohistochemical features of the thyroid gland in dromedary camel. The thyroid glands were collected from naturally dead camels (n=16) of both sexes. Different thyroid gland regions showed positive reactions in different intensities with different histochemical stains for sulphated mucopolysaccharides, polysaccharides, calcium, iron, glycogen and nucleic acid. The immunohistochemical staining with the anti-calcitonin antibody demonstrated moderate activity in the epithelial lining of large or inactive follicles. The epithelial lining of small and distended follicles showed a stronger affinity to calcitonin antibodies. The highest affinity was observed in the area of SCNs and parafollicular cells. It can be concluded that the present study has significance in identifying the various metabolic diseases related to the thyroid gland of camel by histochemical analysis of sulphated mucopolysaccharides, polysaccharides, calcium, iron, glycogen and nucleic acid. The present immunohistochemical study might be good candidates for diagnosing medullary thyroid carcinoma in camels and its treatment.

Key words: Dromedary camel, histochemical, immunohistochemical, metabolic diseases, thyroid gland