

A HISTOLOGICAL AND HISTOCHEMICAL STUDY OF THE SMALL INTESTINE OF THE DROMEDARY CAMEL (*Camelus dromedarius*)

Deniz Korkmaz¹ and Sadiye Kum²

¹Department of Histology-Embryology, Faculty of Veterinary Medicine, University of Harran, Sanliurfa, Turkey

²Department of Histology-Embryology, Faculty of Veterinary Medicine, University of Adnan Menderes, Aydin, Turkey

ABSTRACT

This study was aimed at the investigation of the histological and histochemical features of the small intestine in the one-humped camel (*Camelus dromedarius*), in view of the metabolic characteristics of this species. For this purpose, the duodenum, jejunum and ileum of 6 healthy adult camels were used. Microscopic examination revealed that the length of the mucosal folds (villi) decreased progressively from the duodenum to the ileum. The deepest crypts were observed in the duodenum ($P<0.001$) and the longest villi were detected in the jejunum ($P<0.001$). Villi with the largest crypt diameter were observed in the ileum ($P<0.001$). The small intestine epithelium consisted of 3 parts: the tip of the *villus intestinalis*, the villus-crypt space and the crypt base. These parts were examined for their histochemical features, and data were evaluated subjectively. Goblet cells were rich in neutral carboxylic acidic mucosubstances and poor in sulfated acidic mucosubstances. While the concentration of the neutral mucosubstances was higher at the tip of the villi, the concentration of the acidic mucosubstances was higher in the crypts. The present study describes the histological/histochemical structure of the small intestine in the one-humped camel (*Camelus dromedarius*) and thereby, provides an opportunity for the comparison of findings obtained in camels and other ruminant species.

Key words: Camel, histochemistry, histology, mucosubstance, small intestine