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A histologic and histomorphometric study of the first stomach chamber of the dromedary (*Camelus dromedarius*)

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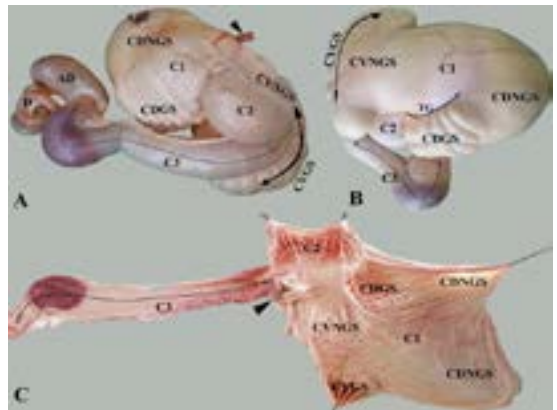
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To date, there are differing interpretations of the number and nature of the stomach compartments of the dromedary (*Camelus dromedarius*). There is also a paucity of histological descriptions of the different anatomical regions of their multi-chambered stomach. There are even fewer studies reporting age-related histomorphometric changes of the dromedary stomach complex. In this study, tissue samples from two glandular and two non-glandular regions of the stomach's first compartment (C1) were collected from 48 healthy dromedaries of four age groups; 1 - 4 years, 5 - 7 years, 8 - 11 years and 12 - 16 years. After fixing in 10% buffered formalin, the specimens were processed routinely, stained with H&E, their histology examined and the thickness of the different histological layers measured. The histological data were similar to those previously reported whilst the histomorphometric data revealed significant intergroup variation ($p=0.001$) in the thickness of all layers in the caudodorsal glandular sac and the cranioventral non-glandular sac of C1. However, in the cranioventral glandular sac, the mucosal thickness was insignificant ($p>0.05$) and in the caudodorsal non-

glandular sac the thicknesses of the mucosa, circular layer of the muscular layer and serosa were insignificant ($p>0.05$) in the different age groups. This study has shown that the histological layers in the different regions of the first compartment of the dromedary stomach gradually increase in thickness with the animal's age.



Biography

Ahmad Al Aiyan has completed his PhD at the age of 34 years from the Veterinary Medicine department at the Free University of Berlin. In 2014, he joined the UAEU as an Assistant Professor at the Department of Veterinary Medicine, College of Food and Agriculture, United Arab Emirates University. He holds a PhD in applied anatomy and MSc in animal science.

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