

MORPHOLOGICAL ASPECTS OF THE DUODENUM IN *STRUTHIO CAMELUS*

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SUMMARY

In the speciality literature the informations referring to the morphology of the digestive apparatus in *Struthio Camelus* are extremely rare, the majority of them referring to *Gallus domesticus* specie.

The researches were made on 5 subjects of 17 days old. The macroscopical investigations were done at the Compared Anatomy discipline, using as study method the dissection, while the histological investigations have been done at the Cellular Biology, Histology and Embryology discipline. The pieces ingathered from the duodenum and fixed in neutral saline formalin were later processed for including in paraffin. The paraffin blocks have been sectioned 6 microns thick and colored using hematoxilin-eosin, hematoxilin-eosin-methyl blue and Giemsa stains.

The first portion of the small intestine, the duodenum, forms an ansa similar to the ones described in other birds, and in the concavity of the ansa the pancreas can be found. At the origin of the proximal branch of this ansa, the common hepatic duct opens. At this specie, the gall bladder is missing. The pancreas has a main pancreatic duct that approaches the duodenum in the terminal portion of the distal branch of the ansa, through the major duodenum papilla. There were no secondary pancreatic ducts identified.

As a result of the histological studies, it has been noticed that the 17 days old ostrich duodenum presents intestinal villi of different heights but with a constant diameter, in general. The villi of maximum height have the tendency to send out lateral expansions, starting from the middle third to the apical region. The epithelium that layers the villi is simple columnar epithelium, with striated border, in the componence of which columnar cells, goblet cells and cells during the differentiation process are found.

The continuity of the duodenal epithelium in the depth of the lamina propria determines the formation of some short Lieberkühn glands. They end near the muscularis mucosae with a dilatated region, having a tubulo-alveolar aspect. Their cellularity is, at this age, in process of differenciating. The muscularis mucoasae is represented by a thin layer of smooth muscular fibers, longitudinally oriented, adherent to the external muscularis due to a submucosae that contains rare conjunctive fibers.

The external muscularis presents an internal circular layer and an external, longitudinal layer, made up by smooth muscular fibers, between which integrated neurons belonging to the nervous Auerbach plexus appear. The external layer is in contact with loose connective tissue, where the vascular formations are numerous, covered by a simple squamous epithelium, both constituting the serosa.