

Muscular Stomach in Birds of Prey, Common Kestrel (*Falco tinnunculus*), Steppe Eagle (*Aquila nipalensis*), Golden Eagle (*Aquila chrysaetos*) and Imperial Eagle (*Aquila heliaca*); A Morphological Evaluation

Ali Kalantari-Hesari^{1*}, Mohammad Babaei², Kaveh Esfandiari³ and Hassan Morovvati⁴

¹ Assistant Professor, Department of Pathobiology, Faculty of Veterinary Science, Bu-Ali Sina University, Hamedan, Iran

² Assistant Professor, Department of Clinical Sciences, Faculty of Veterinary Science, Bu-Ali Sina University, Hamedan, Iran

³ PhD Graduated of Histology, Faculty of Veterinary Medicine, University of Tehran, Tehran, Iran

⁴ Professor, Department of Basic Sciences, Faculty of Veterinary Medicine, University of Tehran, Tehran, Iran

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Abstract

Muscular stomach or gizzard is one of the most important parts of gastrointestinal tract in birds for mechanical and chemical digestion and can vary depending on the bird's eating habits. In the present study, the morphology of muscular stomach in common kestrel, steppe eagle, golden eagle and imperial eagle has been investigated and compared. *Materials & Methods:* In this study, common kestrel (n=4), steppe eagle (n=5), golden eagle (n=4) and imperial eagle (n=6) which died because of broken leg and wing, sent to the faculty of veterinary science at Bu-Ali Sina University of Hamadan. The gizzard samples were fixed in 10% formalin buffer solution and the histological process was carried. Finally, H&E, Masson's trichrome, Orcein and PAS staining were utilized. *Results:* The most important difference between the stomach of steppe, golden, and imperial eagles and common kestrel was the lack of keratinous layer in the surface of stomach in eagles. The histological structure of stomach in imperial eagle was more similar to that of steppe eagle. The differences of the stomach of imperial eagle were due to the presence of a thick muscle layer in several different rows with different directions in comparison with steppe and golden eagles. *Conclusions:* It can be concluded that, the structure of muscular stomach in common kestrel was similar to gizzard, while the stomach in three species of eagles did not have a keratinous layer.

Keywords: Birds of prey, Common kestrel, Eagles, Histology, Muscular stomach

* **Corresponding Author:** Ali Kalantari-Hesari, Assistant Professor, Department of Pathobiology, Faculty of Veterinary Science, Bu-Ali Sina University, Hamedan, Iran
E-mail: a.kalantarihesari@basu.ac.ir



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