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Morphological Variation of the Mesenteric Lymph Node in Dromedary Camels: The Impact of Rearing Systems

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Abstract : The study intends to evaluate the morphological changes in the mesenteric lymph nodes of dromedaries in different rearing systems. we aimed to evaluate the adaptative behavior of the animal's immune system with environmental variations, and to conduct a comparative analysis on the morphological features of the mesenteric lymph node of the one-humped camel (Camelus dromedarius) in the region of El Oued, with two different rearing systems, with different practices and different purposes. The study was conducted using histo-morphometric techniques to analyze the morphological features of the mesenteric lymph node of the one-humped camel (Camelus dromedarius) in the region of El Oued. Two groups of dromedaries were used in the study, one group raised in a free-roaming housing system and another group raised in a restricted-roaming housing system. The results revealed that there were significant differences between the two groups in terms of active follicle ratio and size and also the cellular population of functional zones. Animals living and roaming outside the farm barriers were more exposed to pathogens, which leads to the installation of an adaptative process, whereas the animals living under restricted-roaming housing system were not exposed to pathogens. This study indicated that the adaptative behavior of the animal's immune system with environmental variations is the functional translation of morphological changes. The obtained findings revealed that the morphological features of the mesenteric lymph node of the one-humped camel (Camelus dromedarius) in the region of El Oued are directly linked to the rearing system practices

Keywords : adaptative behavior, dromedary, lymph node, morphology, rearing systems
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