

Abstract

Hedgehog is a mammal classified in insectivorous order and urchin family. There are 4 species of hedgehog in Iran which the long-eared hedgehog is among the smallest ones. Hedgehogs inhabiting in Sistan and Balouchestan province is categorized as long-eared hedgehog. Maintaining these animals as a household pet is progressively being increased. So that these species possess a crucial role in transmission of zoonotic diseases and entail adequate and comprehensive data in various scientific aspects such as the precise recognition of the histology of body organs.

The respiratory system is responsible for the transmission of oxygen and carbonic gas from the inhaled air to tissues and vice versa, respectively. This system is consisted of two parts: air-conducting portion enclosing nose, nasopharynx, larynx, trachea, bronchus and bronchioles and air-exchange portion such as respiratory bronchioles, air ducts, alveolar sacs and alveoli.

In order to histologically study of trachea and lungs a number of 10 mature male and female hedgehogs weighing as a mean of 350 gram were randomly captured on the suburbs of Zabol city. After euthanasia, trachea and lungs were brought out from the thoracic cavity and histologic samples were taken. The levels of tissue preparation were performed by autotechnicon machine. Then, after preparation the paraffin blocks from the desired tissue, fine sections measuring 5-6 μm were obtained by microtome device and in the following routine Haematoxilin and Eosin (H & E) stain was accomplished. Consequently, the stained sections were examined in different magnifications by a light microscope and histological aspects of trachea and lungs were studied.

Histologically, the structure of trachea was similar to other mammals and the tracheal muscle was embedded in the inner part of the cartilage suggesting a high analogy to those of ruminants as well as humans. The lung tissue was equivalent to those of mammals with no analogy to the lungs of birds. The only remarkable difference was the presence of respiratory bronchus in lung which in comparison to animals lacking this structure such as rodents, pig, horse, cattle and sheep, it was significant.



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Thesis for doctorate degree in Veterinary Medicine

Histological study of lung and trachea in the Hedgehog
(*Hemichius auritus*) in Zabol_Iran

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September 2015