Mirror of Research in Veterinary Sciences and Animals
MRVSA/ Open Access DOAJ

TYPE Research Article
PUPLISHED 25 August 2023
Doi: http://dx.doi.org/10.22428/mrvsa-2023-00121-04

Histomorphological study of thyroid gland in local adult female cats (*Felis catus*)

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OPEN ACCESS

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ARTICLE INFO
Received: 17.04.2023
Revised: 26.07. 2023
Accepted: 29.07.2023
Publish online: 25.08. 2023

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CITATION

Iman Mousa Khaleel, Noor Ibrahim Mohamad Faraj, Walaa Alaa Abdulhussein. (2023). Histomorphological study of thyroid gland in local adult female cats (Felis catus). MRVSA. 12 (1): 67-77.
Doi: http://dx.doi.org/10.22428/mrvsa-2023-00121-04

ABSTRACT

This study was designed to investigate the histomorphological characteristics of thyroid glands in local female cats (*Felis catus*). Eight healthy adult female cat were obtained from local supplier. Half number of animal used to conduct anatomical study, whereas the other half used for histological examination. Gross anatomy (shape and color) location of female cats thyroid were described and macroscopic measurements (weight, length, width, thickness, volume and weight) were listed in tables and statistically analyzed. For microscopic aspect, specimens from each lobe of thyroid were fixed in 10% formalin and processed routinely, then stained followed stains: H & E, periodic acid Schiff (PAS) stain and Masson's Trichrome stain. Anatomically, thyroid glands in female cats consist of two completely separated reddish brown compact lobes (right and left), no isthmus present. Its lobes located at the most cranial part on lateral aspect of the trachea. Statistically, there were no significant differences at ($p< 0.05$) in the anatomical parameters between right and left thyroid lobes. Histologically, thyroid glands covered by a capsule of connective tissue which sent many vascular septa into the glandular parenchyma dividing it into many different sizes and shapes of lobules which contains numerous of different sizes and shapes of follicles . Statistically there was no significant differences at ($p< 0.05$) in the capsule thickness and diameters of different sized follicles between right lobe and left lobes. Each follicle lined by simple cuboidal epithelium. No significant differences in heights of epithelium between right and left lobes. Para follicular cells (C-cells) were observed as a single cells interspersed between the follicular cells or as a small groups of 2-3 cells present between the follicles. Thyroid follicle that contained colloid material gives positive reaction with PAS stain.

Keywords: *Felis catus*, Female, Histomorphology, Thyroid gland.

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