3rd WORLD CONGRESS ON
VETERINARY MEDICINE

April 25, 2022 | Webinar

Received Date: 23 February, 2022 | Accepted Date: 23 February, 2022 | Published Date: 29 April, 2022

Age related Histophysiology of the lingual tonsils of the buffalo (*Bos bubalis*)

Mohamed Zidan, Samar Ez-Elarab, Doaa Zaghloul and **Amira Derbalah**

Alexandria University, Egypt

Statement Tonsils constitute Waldeyer's ring forming the first line of defense against inhaled or ingested antigens and can be a replication sites of some pathogen. The lingual tonsils are a main constituent of this lymphoid ring. Data about age related histophysiology of the lingual tonsils of the buffalo are lacking. Therefore, Fresh lingual tonsils of 15 clinically healthy buffaloes (40 days - 10 years) were investigated macroscopically and with light and electron microscopes. The lingual tonsils from several spherical macroscopic units close to each other on the lateral surface of the tongue posterior to the circumvallate papillae and extended to the epiglottis. Each tonsillar unit had a macroscopic apical crypt. The dimension of these units increased with age (until 5 years) and regressed in older ages to become flat. The crypt was narrow, deep diverticulum lined with stratified squamous non keratinized epithelium continuous with the keratinized surface epithelium and infiltrated with few lymphocytes and plasma cells in calves. At the age of 3-5 years, the thickness of crypt epithelium was reduced with a higher number of infiltrating lymphocytes forming lymphoepithelium. At older age the crypt became narrow, shallow and lined with thicker keratinized epithelium without any lymphocytic infiltration. Lymphoid follicles and interfollicular diffused lymphocytes constituted tonsil parenchyma. The lymphoid follicles of calves were mainly primary follicles. At the age of 3-5 years more than layer of secondary lymphoid follicles was present. At 10 years the number and diameter of the lymphoid follicles were reduced to single small lymphoid follicle, few diffused or no lymphocytes in each tonsillar unit. In a conclusion, the lingual tonsils of the buffalo showed marked postnatal development to reach the peak at 3-5 years followed by involution to loss its function in older age. This should be consider in any immunization process or immunological studies.

Recent Publications

1. Omnya Elhussieny, Mohamed Zidan 2021. Temporospatial characterization of the bronchus associated lymphoid tissue (BALT) of the one humped camel (*Camelus dromedarius*). Tropical Animal Health and Production, 53, 265.

2. Mohamed Zidan and Reinhard Pabst. 2020. Histological characterization of the lingual tonsils of the one-humped camel (*Camelus dromedarius*) Cell and Tissue Research. 380. 107–113.

3. Mohamed Zidan and Reinhard Pabst. 2018. Morphological Charactrization of the lingual tonsils of the one humped camel (*Camelus dromedarius*). Anat Histol Embryol. DOI: 10.1111/ahe.12369. 47(Suppl. 1): 83.

Biography

Mohamed Zidan has more than 30 years' experience in teaching and research in the field oh Histology and Cytology. He is expert in the field of Immunomorphology of different lymphoid organs in different species.

mohamedzidan@alexu.edu.eg