



Morphohistochemical, Immunohistochemical and Histoenzymatic study of Mandibular Salivary Gland in both sex in Awassi Sheep

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Abstract

Background: Salivary glands play an important role in the lubrication of food and protection of the oral mucosa through the production of saliva. Salivary glands are mainly classified into minor and major salivary glands. The parotid, mandibular, monostomatic and polystomatic sublingual, and zygomatic glands Enzyme histochemistry serves as a link between biochemistry and morphology. **Aim:** The objective is to gain a deeper understanding of the morphological structure of the mandibular salivary gland and provide additional information about the histoenzymatic and immunohistochemical structures present in this gland. **Methods:** Fifteen head of healthy animals was used to carried the morphistological and histochemical studies of general structures of the mandibular gland (MSG) and the immunohistochemical and histoenzymatic study was carried to demonstrated the macrophage localization and Alkaline phosphatase deposition respectively. The H& E stain with PAS, Alcian blue and Masson's Trichrom stain was explained the (MSG) in sheep was consisted of thick capsule of connective tissue and septa that divide the gland into lobes and lobules, mainly consisted of collagen fibers. **Results:** The secretory unit composed of predominant mucus acini with diameter ($55.62 \pm 11.74381 \mu\text{m}$) and serous acini with diameter ($33.95 \pm 12.3323 \mu\text{m}$). the systemic ducts were consisted from intercalated duct, striated duct, interlobular duct and interlobar duct with diameters ($63.96 \pm 13.6029 \mu\text{m}$, $183.34 \pm 19.8125 \mu\text{m}$, $181.28 \pm 40.9417 \mu\text{m}$ and $710.7000 \pm 289.9592 \mu\text{m}$) respectively. of the PAS stain have positive reaction in the epithelium of duct and connective tissue, AB stain was gave obvious staining in the interlobar duct. CD 68PG M1 antibody was used and give positive reaction with weak intensity for macrophage. The Alkaline phosphatase gave moderate positive blue to green color around the acini and in the intercalated and striated duct. **Conclusion:** The morphological and histochemical structures of the mandibular gland of sheep was consisted of thicker collagenous connective tissue capsules, delicate septa divided it into prominent lobes and lobules, With large mucous acini and small serous acini, and the its ducts have diameter gradually increased, at the beginning the small diameter of intercalated duct and ended with the large interlobar duct.

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