

Histological study of the parotid and mandibular glands of barking deer (*Muntiacus muntjak*) with special reference to the distribution of carbohydrate content.

ABSTRACT

We investigated the histology and carbohydrate content of the parotid and mandibular glands of the barking deer (*Muntiacus muntjak*). Three adult males were used. Paraffin wax sections of the glands were stained with haematoxylin and eosin (HE), alcian blue (AB), pH 2.5 and periodic acid Schiff (PAS). The acinar cells of the parotid gland were serous, whereas those of the mandibular gland were of the mixed type. The acini of the mandibular gland comprised serous and mucous cells with the mucous type predominating. AB and PAS staining showed high concentrations of acidic and neutral carbohydrates in the mucous cells, but not in the serous cells of the mandibular gland. These carbohydrates were also found in moderate-to-high concentrations in the secreted material in the mandibular duct lumen. However, these carbohydrates were not found in acinar cells of the parotid gland or in the serous cells of the mandibular gland. Thus, carbohydrates in the saliva of the barking deer appear to be produced mainly by the mucous cells of the mandibular glands

Keyword: Parotid and mandibular glands; Carbohydrate; Barking deer.