

Morphometric dimensions of the mouse Parotid Glands of both sexes

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SUMMARY

The goal of this research was to evaluate the morphometric dimensions of the different structures of male and female albino mouse parotid glands. The following morphometric dimensions were evaluated for the acini, intercalated ducts, striated ducts, excretory ducts and stroma: volume density, total compartmental volume, surface density, total external surface, surface-to-volume ratio, cell volume and absolute number of cells. Analysis of the results showed that the parotid gland mass was 43.7% greater ($P < 0.01$) in the male mice than in the females. This difference was due to the fact that the compartmental volumes of the acini, intercalated ducts and striated ducts were markedly higher in the male mice, 57.6% ($P < 0.01$), 253.1% ($P < 0.01$) and 91.1% ($P < 0.05$), respectively. The higher volume of the acinar morphological compartment was due to the total number of cells and average cell volume being higher in the male mice, 24.8% ($P < 0.01$) and 47.7% ($P < 0.01$), respectively. Based on the results obtained, it was concluded that there are morphological differences between male and female parotid glands. These differences are detectable through morphometry, mainly in the morphological acinar and intercalated ducts compartments, which are more developed in male mice.