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THE EFFECT OF AGEING ON MACROMORPHOMETRIC PARAMETERS AND HISTOLOGICAL CHARACTERISTICS OF BASOPHILIC AND ACIDOPHILIC PITUITARY CELLS: ANALYSIS OF MALE CADAVERS

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The aim of this study was to examine the macromorphometric parameters including weight, height, width, volume and length of the pituitary gland, as well as the histological characteristics of the hormone-producing cells. The focus was on basophilic (gonadotropic – luteinizing hormone (LH) producing cells and adrenocorticotropic hormone (ACTH) producing cells) and acidophilic (somatotropic – growth hormone (GH) cells and mammotropic – (prolactin PRL) cells) cells in male cadavers, aiming to assess the characteristics of the pituitary gland in living individuals during ageing. The research included 15 male cadavers of different ages (44 and 89 years), which were divided into three groups. In the first group (I) there were cadavers aged 30 to 49, in the second (II) 50 to 69 years, and in the third (III) 70 years and older. The pituitary cells were immunohistochemically identified by the PAP method using the appropriate antibodies: LH (βLH 1:100), ACTH (hACTH 1:200), GH (hGH 1:200), and PRL (hPRL 1:300). Our results show that the width, height, weight and volume of the pituitary gland did not change significantly ($p > 0.05$) with ageing, while the length of the gland showed statistically significant changes between groups ($p < 0.05$). The length of the pituitary gland was significantly ($p < 0.05$) greater in age groups II and III, compared to group I. In conclusion, the results of the examined macromorphometric parameters showed that only the length of the pituitary gland changed significantly during ageing.

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