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BASILAR ANGLE OF SKULL AS A FORM FACTOR OF HYPOTHALAMIC MAMMILLARY BODIES

ABSTRACT. Background. This study shows the influence of the configuration of the base of the skull on the size of mammillary bodies in the evolutionary aspect. **Objective.** The purpose of the study was to analyze the values of basilar angle of the skull in representatives of different taxonomic groups; since this parameter determines the configuration of the internal base of the skull and the degree of expression of mammillary bodies of the hypothalamus. **Methods.** The study was performed using 355 MRI images of people of both genders aged from 1 to 87 years old and scanned copies of the X-ray of the head of some animals: rats, cats, dogs. The configuration of the base of the skull was determined by x-ray and MRI images in the sagittal projection. **Results.** The study of the basilar angle in animals (rat, cat, dog) and humans showed a correlation between its values and the shape of mammillary bodies. It was revealed that the greatest angle is in rodents (170°) and the least – in humans (123°). It is noted that at a large angle, the brain tightly adherent to the bones of the skull base and mammillary body unexpressed. If the head is offset from the main axis of the body and the value of basilar angle decreased (cats, dogs, people), mammillary bodies are defined as separate anatomical structures. **Conclusion.** We can assume that the degree of expression of mammillary bodies depends on the configuration of the skull base.

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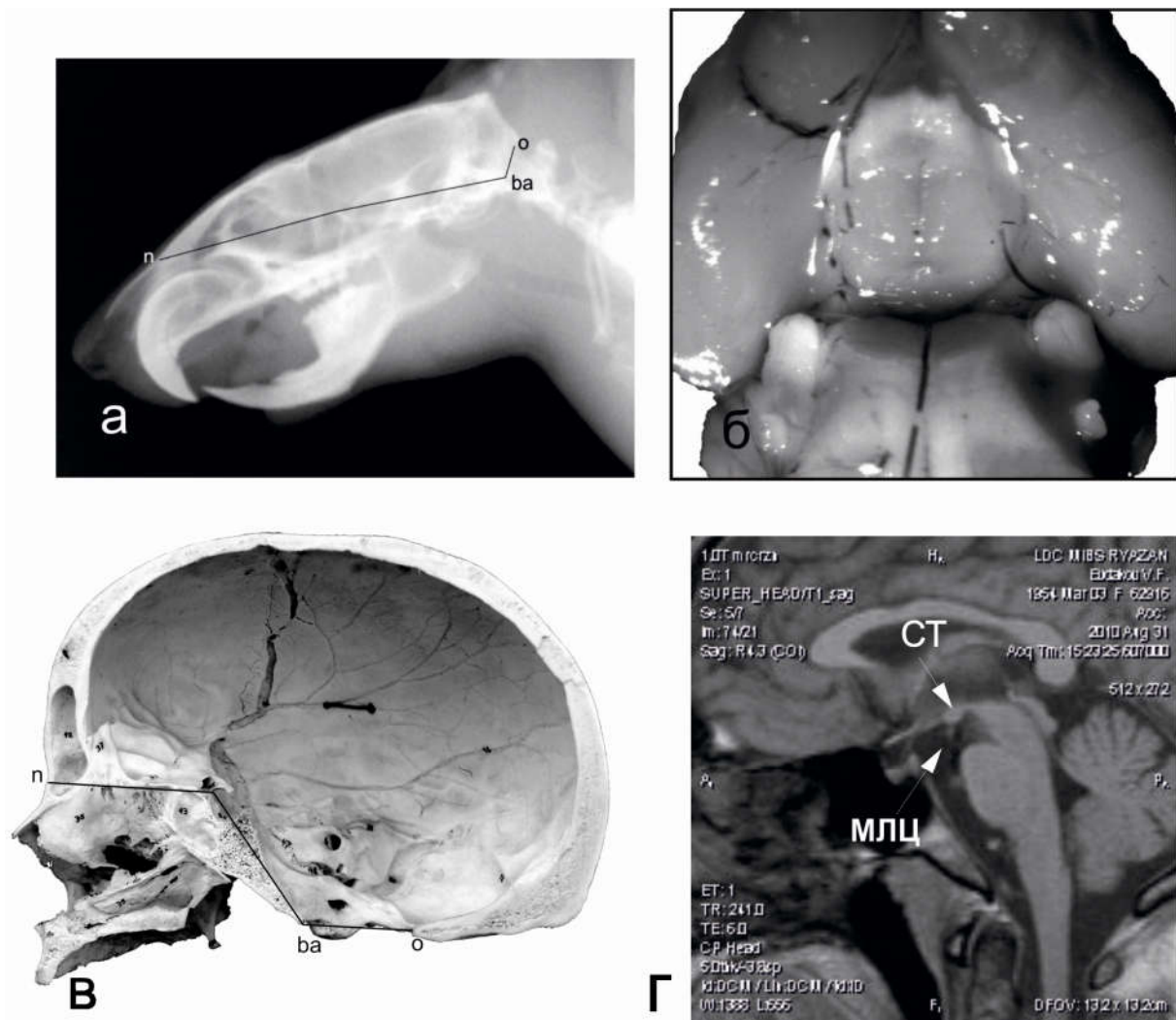


Fig. 1. The ratio of the skull base configuration and the shape of mammary bodies on the ventral brain surface (a, б – rat; B, Г – human body). In the large basilar angle mammary bodies are not seen on the ventral brain surface (a, б). In expressed basilar angle the brainstem bend is formed, and liquor cistern and mammary bodies are seen (B, Г). n - nasion; ba – basion; o – opistocranium; CT – mammary bodies; МЛЦ – interpeduncular liquor cistern.

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