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CHANGES IN MORPHOMETRIC PARAMETERS OF THE PYELOCALYCEAL COMPLEX OF HUMAN OF MATURE AGE BY SEX

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Background. Many pathological processes of the kidneys, in particular urolithiasis, are primarily localized in the elements of the pyelocalyceal complex (PCC). Therefore, the study of the characteristics of the morphometric parameters of PCC by gender is an important part of the differential diagnosis between normal and pathological conditions.

Aim. The study was performed to find the peculiarities of the morphometric characteristics of the PCC with distribution by gender.

Materials and methods. The study was performed on 175 human kidneys (88 kidneys of men and 87 kidneys of women). The kidneys were investigated using morphometric and statistical methods.

Results and discussion. Among the morphometric signs of human PCC, the most significant ones should be distinguished: length, width and square of the anatomical section. PCCs are characterized by significant individual variability depending on gender, therefore parameters of variation statistics are used for quantitative description.

In a specially performed morphometric study, the average values of the length, width and square of the anatomical section of the PCC for persons of both sexes and in the whole group were studied.

The height index of the PCC is in the range of 37.0-92.0 mm, its average value is 65.6 ± 9.5 mm, for men – 67.0 ± 10.1 mm, for women – 64.9 ± 8.7 mm ($P=0.23$).

The width of the PCC varies between 22.0-63.0 mm, the average value is 39.8 ± 6.0 mm, for men – 40.6 ± 6.4 mm, and for women – 39.0 ± 5.4 mm.

Square of the anatomical section of the PCC is in the range of 11.4-57.3 cm², the average value in general is 26.4 ± 6.6 cm², for men – 27.8 ± 7.1 cm², for women – 25.1 ± 5.7 cm² ($P = 0.17$).

Conclusion. As a result on univariate analysis of variance, it was found that the sex insufficiently affects all analyzed morphometric parameters of the pyelocalyceal complex. The greatest influence of the sex is manifested in the formation of parameters of the pyelocalyceal complex. In the formation of parameters of the width and height of the pyelocalyceal complex, the effect of gender is almost absent.