

## Variants of the renal pedicle.

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**Background.** The renal pedicle includes a wide range of number, topography and relationships variations of its constituents. Taking into consideration the high demand for renal surgery and clinical significance of the data related to the components of the renal pedicle, the aim of our study was to determine the number and topographical variants of the renal pedicle elements.

**Materials and methods.** The study was carried out at the Department of anatomy and clinical anatomy of *Nicolae Testemitanu* State University of Medicine and Pharmacy, Republic of Moldova. Thirty kidneys (14 right and 16 left), collected from formalized cadavers were examined.

**Results.** The variants of the renal pedicle were established in 19 (63.3%) of cases. Six types of topographical relationships of the renal pedicle elements were revealed. The most common type was AVU (artery-vein-ureter) – 12 (40%) of cases; followed by the classical type VAU (vein-artery-ureter) – 11 (36.7%); and each of the following types: UAV (ureter-artery-vein), UVA (ureter-vein-artery) and VUA (vein-ureter-artery) were marked out in 2 (6.7%) cases; type AUV (artery-ureter-vein) was present in a single case (3.3%). The renal artery divisions varied from 1 up to 7 branches. A single renal artery was present in 6 (20%) of cases; 2 branches in 15(50%) cases; 3 branches in 3 (10%); 4 branches in 4 (13,4%), and in single cases were determined 5 (3,3%) and respectively 7 (3.3%) arterial branches. The number of the renal vein tributaries varied from 1 up to 3. In 21 (70%) of cases the renal vein did not had any tributaries outside the renal parenchyma; 2 tributaries were present in 7 (23,3%), and in 2 cases (6,7%) were present 3 tributaries. There were not identified any number variants of the ureter.

**Conclusions.** Six topographic types of the renal pedicle elements were established. The most common type revealed by us was type AUV. The number of the renal artery divisions were twice higher than the number of the venous tributaries. Three positions of the ureter towards the renal vessels were determined: anterior, intermediate and posterior one.

**Keywords:** renal pedicle, variability, renal artery, renal vein, ureter