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The Types of Renal Calyces and Pelvises in People from the Lublin Region

Typy kielichów i miedniczek nerkowych u mieszkańców Lubelszczyzny

The development of the urinary tract is a relatively complex process (3) resulting in at least a few variations of this system. The knowledge of the frequency of their occurrence is of special importance for the modern, expansively advancing USG diagnostics.

We have not come across any scientific papers or books discussing the structural variability of the renal calyces and pelvises among the inhabitants of the Lublin region. Therefore, we have decided to investigate this problem.

MATERIAL AND METHODS

The study material comprises 100 kidneys taken from the cadavers of people deceased at the age from 0 to 80 years whose urinary tracts showed no pathological changes.

The renal calyces and pelvises were injected through the urether with resin Duracryl and after polymerization the kidney parenchyma was corroded in hydrochloric acid.

RESULTS AND DISCUSSION

Among the inhabitants of the region of Lublin there were found three, described in literature, fundamental types of renal calyces and pelvises (1, 2, 4): ampullar, transitional and branching. They are shown in Table 1.

The most common type found in our study was the branching one, amounting to 65% of cases, the majority of which — 43% represented the two-branching type (Fig. 1) while 22% the three-branching type (Fig. 2). In

Table 1. The types of calyces and pelvises in people from the Lublin region (in %)

Type	♀	♂	♀+♂
1. Branching type	70	60	65
a) two-branching	40	46	43
b) three-branching	30	14	22
2. Transitional type	17.5	32	25
3. Ampullar type	12.5	8	10

women the branching type made up for 70% of cases, out of which the two-branching type was represented by 40% and the three-branching one by 30% of cases. In men the analysed type of renal calyces and pelvises constituted 60% of cases (two-branching — 46%, three-branching — 14%).

The second commonest was the transitional type (Fig. 3) that comprised 25% of all cases; 17.5% in women and 32% in men.

The smallest frequency of occurrence was observed among the ampullar type (Fig. 4) — 10% of cases. Among women it constituted 12.5% of cases and among men 8% of cases.

Results similar to our findings were obtained by Sokołowska-Pituchowa (4) who investigated the population of the region of Lvov. Piasecki et al. (2) analysed the material from the Małopolska region on the basis of corrosion preparations and roentgenograms. Their results were similar to ours. The investigations of Niżankowski (1) concerned the occurrence of individual of renal calyces and pelvises in the region of Dolny Śląsk (Lower Silesia). His results were different from the ones obtained in the Lublin region. He found that the most common type of this system was the transitional one (55% of the studied cases), the second commonest was the branching type (38%) and the last common — the ampullar type (7% of the cases).

Basing on the examined material and data obtained from available literature it can be stated that in the regions of Lublin, Lvov and Małopolska the branching renal calyces and pelvises constituted the dominating type of this system. The least common was the ampullar type. In the region of Lower Silesia, however, the transitional type occurred most commonly.

REFERENCES

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Fig. 1. The two-branching type of the calyces and pelvises. A corrosion preparation



Fig. 2. The three-branching type of the calyces and pelvises. A corrosion preparation



Fig. 3. The transitional type of the calyces and pelvises. A corrosion preparation



Fig. 4. The ampullar type of the calyces and pelvises. A corrosion preparation

STRESZCZENIE

Badania przeprowadzono na 100 nerkach pobranych ze zwłok ludzi w wieku od 0 do 80 lat obojga płci, u których nie stwierdzono chorób układu moczowego. Układ kielichowo-miedniczkowy nastrzykiwano poprzez moczowód żywicą Duracryl i następnie po jej spolimeryzowaniu wytrawiano miąższ nerki w kwasie solnym. Uzyskany materiał posegregowano na poszczególne typy. Przeprowadzono porównanie częstości występowania typów układu kielichowo-miedniczkowego na Lubelszczyźnie w całości i z podziałem na płeć oraz odniesiono wyniki do danych z Ziemi Lwowskiej, Małopolski i Dolnego Śląska.

