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Introduction & Objectives: MESTK is a rare benign cystic lesion of the kidney composed of epithelial and stromal cells. It appears predominantly in postmenopausal women. Only a few cases of malignant transformation were described so far in the literature. The aim of this study was to assess the typical radiological features of MESTK and the possibilities of the treatment. Most of the cases are described as Bosniak III category. The malignancy rate in this group of lesions is to 50%, but most of the lesions in Bosniak III category is benign or of low malignant potential.

Materials & Methods: We describe 10 cases of MESTK in the time period 1/2004 - 1/2019. All of the patients underwent surgery for a cystic renal tumour. All cases were classified by Bosniak according to CT imaging. In the ambiguous findings on CT additional MRI was performed. All of the histological specimens were reviewed by experienced uropathologist according to 2016 WHO classification of the renal tumours.

Results: 10 patients. All of them women. The average age was 55.8 (44-71) years. The average size of the lesion was 6.4 cm (2-13). Bosniak categories were as followed: 8/10 (80%) Bosniak III. One case Bosniak IV - 1/10 (10%) and 1 case Bosniak IIF (10%). The localisation of the lesion was mostly in pars intermedia or centrally located tumour - 8/10 cases (80%), which technically didn't allow nephron-sparing surgery. The preoperative assessment of the lesions was done according to RENAL nephrometry scoring system: 2 cases 9a, 1 case 9ah, 1 case 10ah, 1 case 10ph, 3 cases 10xh and 2 cases 11ah. The most common type of surgery was nephrectomy - 9 cases (90%) - 5/9 cases (55,5%) were performed by mini-invasive approach (5 laparoscopic nephrectomies). In one case open partial nephrectomy was done.

Conclusions: MESTK is typically described as Bosniak III category (up to 80%) on imaging studies. Although MESTK is a benign lesion, most of these lesions are treated by nephrectomy, which is some kind of overtreatment. In all cases, we tried to make nephron-sparing surgery, but technically it was very difficult or impossible, which demonstrate high RENAL score values of the lesions. Nowadays we can't get a straight diagnosis of MESTK from imaging studies and more studies are needed to prevent the patient's overtreatment.

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