

*Dave Dhara***MORPHOLOGICAL CHARACTERISTICS OF THE PERITUMORAL ZONE OF CLEAR CELL RENAL CARCINOMA****Tutor MD, PhD Dniitriev M., assist Dolbyk- Vorobey Y. G.***Department of Pathological Anatomy
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Objective. Clear cell renal carcinoma (CCRC) is the most common form of malignant kidney cancer of aggressive nature. CCRC takes about 2% occurrence among all other malignancies and about 65-70% of all renal cell carcinomas. Invasive tumor growth largely depends on the state of the peritumoral zone. The study on peritumoral foci is limited but there are certain points that is significant for the prediction of grades because usually, in the nearby parenchyma rather than distant parenchyma shows many histological changes.

Aim: To assess morphological changes in the peritumoral zone and compare them with distant kidney tissue in patients with CCRC.

Materials and method. Twenty four CCRC cases were taken under consideration who has gone through the surgical process of tumor removing, administered by the department of Pathological Anatomy. Histological samples stained by hematoxylin & eosin were retrospectively analyzed. We have studied such parameters as tumor capsule thickness, percentage of hyalinosis of arteries, hyalinosis of glomeruli, inflammatory reactions, interstitial fibrosis and foci of thyroidization in the peritumoral and distant zone of kidney tissue. The cases were categorized on the basis of age, gender, the degree of tumor differentiation and T-value according to the TNM classification. To describe the peritumoral changes in percent, we used non parametric statistics.

Results and discussion. The frequency of occurrence of CCRCs is higher in males (n=17/70.8%) compared to females (n=7/29.2%) (chi-square=2.5:1). The age of the patient ranged from 40 to 81 years. The mean age of the cohort was 59.7±8.36 years. With respect to T-value in TNM staging T3 and T3a were predominant (n=21/87.5%), in 3 (11.1%) patients T was estimated as T2. According to grading system, G2 was revealed in 12 (50.0%) cases, G3 — in 7 (29.2%), G4 - in 4 (16.7%). Necrosis was observed in the tumor tissue of 9 (37.5%) cases. The percentage of sclerosed glomeruli, as well as the percentage of vessels with sclerosis and wall hyalinosis, was higher in the peritumoral zone than in distant parts of the kidney tissue. In the peritumoral zone, lymphoid infiltration of the interstitium was more pronounced. Peritumoral and distant zones did not differ in the presence of hemorrhages and thyroid foci (p>0.05).

Conclusions. The assessment of peritumoral zone changes in CCRC has an important prognostic value as it helps to determine the rate of tumor growth and rate of metastasis.