

## Case Report of Primitive Neuroectodermal Tumor of Kidney and a Review

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### ABSTRACT

**Introduction:** The peripheral primitive neuroectodermal tumor (PNET) is a malignant small round cell neoplasm of neural origin that arises outside the brain, spinal cord and sympathetic nervous system. This tumor most often arises in the chest wall and paraspinal region; however, less common origins have been described in literature including bones, limbs and genitourinary tract. We here report one case of primitive neuroectodermal tumor of kidney in our Institution.

**Case report:** A 23 year old male presented with complaints of pain abdomen and fever since a week. There was no history of hematuria, vomiting or burning micturition. On examination, right renal angle tenderness was present; a vague mass was palpable in right lumbar region. Ultrasonography showed lobulated hypoechoic lesion in lower pole of right kidney. CT scans revealed, well defined heterogeneously enhancing iso- to hypo-dense lesion measuring 5 × 4.6 × 4.6 cm in lower pole of right kidney. On post contrast study, lesion shows heterogenous enhancement with multiple non enhancing areas within-s/o necrosis. Patient underwent nephrectomy. Histopathology revealed round cell tumor with capsular, perinephric fat and lymphovascular invasion. Renal sinus showed tumor infiltration. Immunohistochemically neuron specific marker was identified.

**Conclusion:** PNET is extremely rare in the kidney, but because of its imaging characteristics, when a large necrotic and hemorrhagic renal mass is found in within the tumor are less likely to indicate this diagnosis. Exact diagnosis of PNET of kidney should be done using immunohistochemical markers.

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