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Wilms' Tumor

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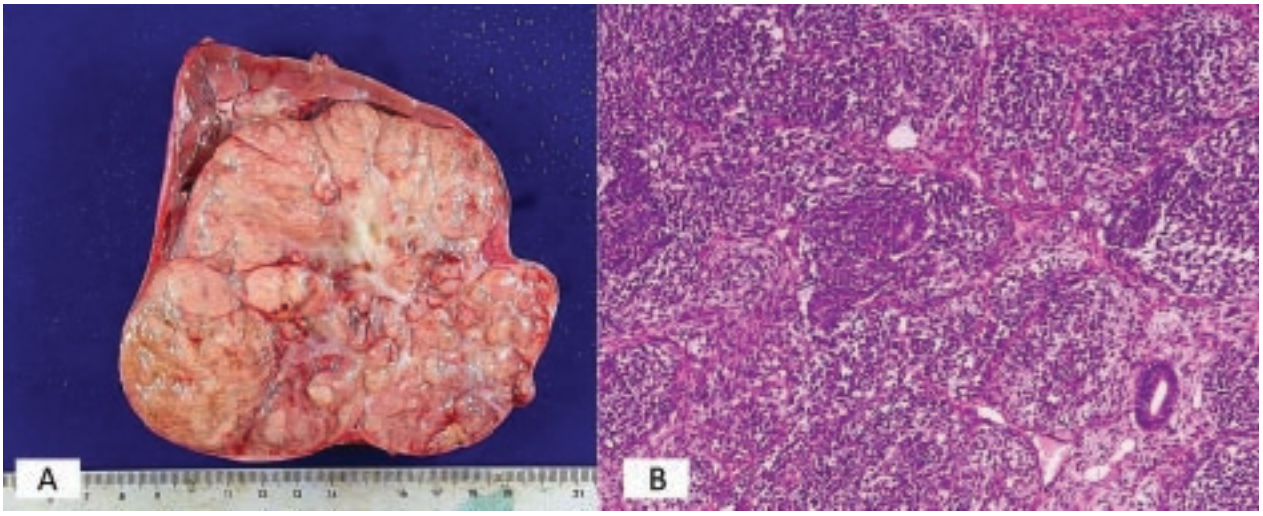

Fig. 1. (A) A huge pale tan mass occupying nearly the entire right kidney. (B) Histopathology shows a Wilms' tumor composed of undifferentiated blastema, undifferentiated mesenchymal tissue and immature epithelial elements (HE×200).

A huge right kidney mass was found in a 2 year-old boy by his mother. He was admitted to our hospital and a radical nephrectomy was performed. Grossly, a pale tan neoplasm nearly filled the right kidney (Fig. 1A). Histopathology showed a Wilms' tumor containing cellular areas composed of undifferentiated blastema, losse stroma containing undifferentiated mesenchymal cells and immature tubules (Fig. 1B). Wilms's tumor is the most frequent abdominal solid tumor in children, with a prevalence of 1 in 10,000 tumors. In most (90%) cases, Wilms's tumor is sporadic and unilateral. About 10% of sporadic cases of Wilms's tumor are associated with defects of WT1, the Wilms' tumor gene located on chromosome 11 (11 p 13). Histopathologically, the tumor is composed of elements that resemble normal fetal tissue including, metanephric blastema, immature stroma (mesenchymal tissue) and immature epithelial elements. Wilms' tumor usually presents in children between 1 and 3 years of age, and 98% of cases occur before 10 years of age. Most often, the diagnosis is made after recognition of an abdominal mass. Patients younger than 2 years of age tend to have a better prognosis. Chemotherapy and radiation therapy, combined with surgical resection, have dramatically improved the outlook in patients with this tumor and a long-term survival rate of 90% is reported.

FURTHER READING

1. Hamilton TE, Shamberger RC: Wilms' tumor: Recent advances in clinical care and biology. Semin Pediatr Surg 2012; **21**:15-20.
2. Haldar S: Wilms' tumour. J Indian Med Assoc 2010; **108**:816.
3. Md Zin R, Murch A, Charles A: Pathology, genetics and cytogenetics of Wilms' tumour. Pathology 2011; **43**:302-312.