

Renal tumors in infants less than 6 months of age.

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21

Abstract:

BACKGROUND/PURPOSE: Renal tumors are rare in infants less than 6 months of age and may have associated paraneoplastic symptoms. To better define the characteristics of these tumors the authors reviewed their 10-year institutional experience. **METHODS:** The authors searched the pathology database to identify all renal tumors resected at their institution since 1992 (after IRB approval and guidelines). The clinical presentation, operative details, pathology, and outcome for all children \leq 6 months of age were reviewed. **RESULTS:** Of 101 children who had renal tumors resected during this period, 11 (11 %) were 6 months of age or less. Histopathologic examination showed congenital mesoblastic nephroma (CMN) in 7 patients (4 with cellular features), Wilms' tumor in 3 patients, and ossifying renal tumor of infancy in 1. Renal masses were detected antenatally in 2 patients and during newborn examination in 1 patient; however, the mean age at diagnosis was 72 \pm 18 days. Ten children had a palpable abdominal mass, 3 had gross hematuria, and 6 had hypertension (4 CMN; 2 Wilms'). Only 1 child had hypercalcemia (cellular CMN). Ten infants had nephroureterectomy, and 1 had a partial nephrectomy. All patients had either stage I or II disease. At follow-up (mean 4.2 \pm 1.2 years) 10 patients are alive with no evidence of disease. One newborn with hydrops and a very large congenital

Wilms' tumor had abdominal compartment syndrome and died during surgery. **CONCLUSIONS:** About 10% of renal masses may occur in infants less than 6 months of age. Although mesoblastic nephroma is the most common renal tumor in this age group, Wilms' tumor also may be seen. Paraneoplastic syndromes, such as hypertension and hypercalcemia, are common in these infants and are not specific for tumor type. These tumors generally present at an early stage and have an excellent prognosis overall.

Major Subjects:

- Kidney Neoplasms / complications / congenital / * epidemiology / pathology / surgery
- Nephroblastoma / complications / congenital / * epidemiology / pathology / surgery
- Nephroma, Mesoblastic / complications / * epidemiology / pathology / surgery

Additional Subjects:

- Disease-Free Survival
- Female
- Hematuria / etiology
- Humans
- Hydrops Fetalis / complications
- Hypercalcemia / etiology
- Hypertension, Renal / etiology
- Infant
- Infant, Newborn
- Male
- Nephrectomy
- Paraneoplastic Syndromes / epidemiology / etiology
- Retrospective Studies
- Treatment Outcome
- Ureter / surgery

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