

Intrarenal Mature Cystic Teratoma With Renal Dysplasia

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INTRODUCTION

Teratoma of the kidney is exceptionally infrequent.^(1,2) Most subjects in which this diagnosis has been considered represent either retroperitoneal teratoma with renal extension or Wilms' tumor with teratoid features.⁽³⁾ We report intrarenal teratoma with renal dysplasia in a 6-month-old boy.

CASE REPORT

A 6-month-old boy presented with lump in the right hypochondriac region noticed by his mother. There was no history of hematuria, pyuria, fever, anorexia, or vomiting.

Abdominal examination revealed a firm mass moving up and down with respiration in the right hypochondriac region. Ultrasonography and abdominal computed tomography scan revealed a cystic mass arising from the right kidney.

On investigations, his serum level of creatinine, hemoglobin, and total leukocyte count were 0.62 mg/dL, 10.4 gm/dL, and 16 000/cmm, respectively. Liver function tests were within the normal limits. Urine analysis was unremarkable.

Surgical exploration through an anterior subcostal transperitoneal incision revealed a tense cystic mass arising from the kidney. Right nephrectomy was done.

The pathological gross examination of the kidney revealed a cystic mass on the outer surface measuring 6.0 cm in size. Cut surface showed a cavity filled with jelly-like material, clear fluid, and calcified material. Remaining part of the kidney was unremarkable. Microscopic examination of the cystic mass revealed presence of extensive cartilage, sebaceous glands, ciliated columnar epithelial cells, and scattered serous material. Endodermal, ectodermal, and mesodermal elements were all noted in the tumor (Figure 1). The neighboring renal parenchyma

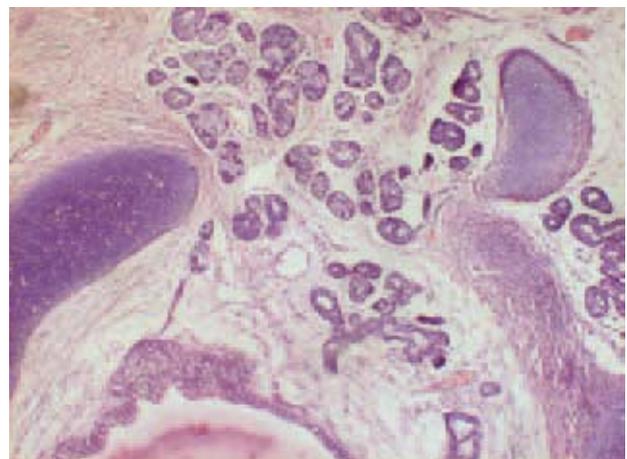


Figure 1. Cartilage with glands (hematoxylin and eosin stain $\times 100$).

showed primitive glomeruli

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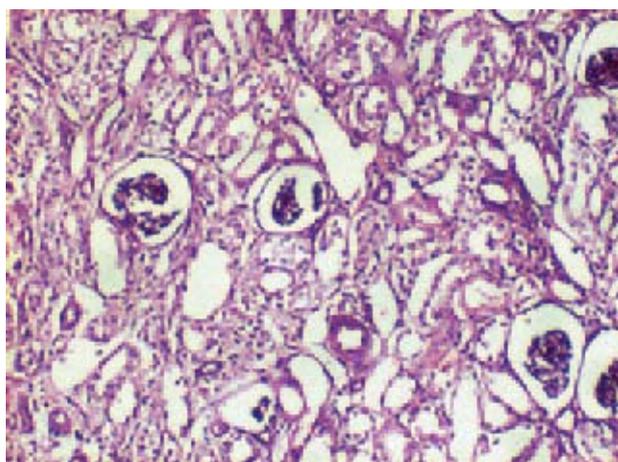


Figure 2. Primitive glomeruli with tubules (hematoxylin and eosin stain, $\times 100$).

surrounded by primitive tubules and collecting ducts in the mildly edematous parenchyma (Figure 2). The histopathological diagnosis was Mature Cystic Teratoma of the kidney with renal dysplasia.

DISCUSSION

Teratoma is a tumor with tissue or organ components resembling normal derivatives of all three germ layers. Teratomas have been reported to contain the hair, the teeth, the bone, and rarely the eyeball, the torso, the hand, the feet, or other limbs. The kidney is one of the least common sites for teratoma and other germ cell tumors.⁽⁴⁾

Benign cystic renal teratomas are uncommon clinical entities. Renal teratomas are rare and most have been dismissed as retroperitoneal teratomas secondarily invading the kidney or Wilms' tumor with teratoid feature.⁽⁴⁾

A benign cystic renal teratoma associated with ipsilateral hydronephrosis, urinary tract infection, and spontaneous abortion with histological confirmation was noted in a 25-year-old woman.⁽⁴⁾ Otani and colleagues reported a case of intrarenal teratoma with multiple cystic masses in the upper and lower poles of the left kidney on computed tomography scan in a 6-year-old boy.⁽⁵⁾ Glazier and associates reported a left renal teratoma with a cystic mass on ultrasonography in a 59-year-old woman.⁽¹⁾ Ishii and coworkers reported a large right intrarenal teratoma in a 3-month-old girl.⁽²⁾

Primary renal carcinoid tumors associated with

teratoma are also noted. Kojiro and colleagues reported a large carcinoid tumor (17cm) with a cystic teratoma in a 40-year-old man.⁽⁶⁾ Kim and Suh reported a primary carcinoid tumor in a mature teratoma of the kidney in a 39-year-old woman.⁽⁷⁾ We have reported an intrarenal mature cystic teratoma with renal dysplasia in a 6-month-old boy with histological confirmation.

Teratomas are usually benign; however, malignant metastases have been seen in some well-differentiated teratomas of other organs and could presumably occur with those arising in the kidney.⁽⁸⁾

Although true intrarenal teratomas are extremely rare, they must be considered in the diagnosis of abdominal masses in children and adults. They should be distinguished from teratoid Wilms' tumor and other renal cystic lesions.

CONFLICT OF INTEREST

None declared.

REFERENCES

1. Glazier WB, Lytton B, Tronic B. Renal teratomas: case report and review of the literature. *J Urol.* 1980;123:98-9.
2. Ishii C, Singleton EB, Gresik MV. Computerized tomography demonstration of an intrarenal teratoma. *J Urol.* 1987;137:272-3.
3. Yoo J, Park S, Jung Lee H, Jin Kang S, Kee Kim B. Primary carcinoid tumor arising in a mature teratoma of the kidney: a case report and review of the literature. *Arch Pathol Lab Med.* 2002;126:979-81.
4. Nzegwu MA, Aligbe JU, Akintomide GS, Akhigbe AO. Mature cystic renal teratoma in a 25-year-old woman with ipsilateral hydronephrosis, urinary tract infection and spontaneous abortion. *Eur J Cancer Care (Engl).* 2007;16:300-2.
5. Otani M, Tsujimoto S, Miura M, Nagashima Y. Intrarenal mature cystic teratoma associated with renal dysplasia: case report and literature review. *Pathol Int.* 2001;51:560-4.
6. Kojiro M, Ohishi H, Isobe H. Carcinoid tumor occurring in cystic teratoma of the kidney: a case report. *Cancer.* 1976;38:1636-40.
7. Kim J, Suh K. Primary carcinoid tumor in a mature teratoma of the kidney: ultrasonographic and computed tomographic findings. *J Ultrasound Med.* 2004;23:433-7.
8. Prasad SB. Intrarenal teratoma. *Postgrad Med J.* 1983;59:111-2.