A 4-YEAR-OLD girl with no noteworthy medical history presented to the emergency department complaining of right arm pain after falling off a swing. A nondisplaced transverse fracture of the proximal right humerus was discovered on initial radiographs. On subsequent physical examination, a large abdominal mass was palpated. A plain radiograph of the abdomen demonstrated a masslike density in the left upper quadrant with inferior displacement of the transverse colon and medial displacement of the stomach bubble. Calcifications were noted on the plain radiograph. A computed tomographic scan of the abdomen was immediately obtained (Figure 1 and Figure 2).

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Denouement and Discussion

Multilocular Cystic Wilms Tumor

Although usually a solid lesion, Wilms tumors can have unusual radiographic manifestations. Wilms tumor can appear as a multilocular cystic neoplasm and can occasionally mimic other cystic lesions of the kidney.1,2

Wilms tumor is a triphasic embryonic neoplasm containing epithelial, blastemal, and stromal elements. Wilms tumors can also contain various components of muscle, cartilage, bone, fibrous tissue, and even fat. Calcification seen on roentgenographic studies is uncommon. Wilms tumors have even been reported in extrarenal locations.1

Typically, Wilms tumor appears on computed tomographic (CT) scan as a rounded renal mass of low attenuation with inhomogeneous contrast enhancement. The tumor is usually solid and may appear to be septate because of fibrous stroma.2 There may be evidence of hemorrhage or cystic necrosis on CT scan in less than 10% of cases and rarely is it predominantly cystic.3 Calcifications are seen in as many as 75% of cases.5

CT, renal cell carcinoma is a nonenhancing solitary mass and may have areas of hemorrhage and necrosis. Calcification is seen in as many as 73% of cases.3

Multicystic dysplastic kidney is a lesion of the neonatal period, usually associated with a nonfunctioning kidney. Uncommonly, multicystic dysplastic kidney can occur in a segmental form, in which case, the focal cystic mass can appear as a multilocular cystic neoplasm.3

In summary, multilocular cystic Wilms tumor is uncommon. Differentiation from benign cystic lesions relies on identifying solid tumor nodules in the septa. In many cases, differentiation may be difficult. Therefore, Wilms tumor should be considered in the differential diagnosis of multicystic cystic lesions of the kidney.

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REFERENCES


The Editors welcome contributions to Pathological Case of the Month, Picture of the Month, and Radiological Case of the Month. Those who wish to contribute should send their manuscripts to Dr Gilbert-Barness (Pathological Case of the Month), Department of Pathology, Tampa General Hospital, University of South Florida, Davis Island, Tampa, FL 33606; Dr Tunnessen (Picture of the Month), The American Board of Pediatrics, 111 Silver Cedar Ct, Chapel Hill, NC 27514-1651; or Dr Wood (Radiological Case of the Month), Department of Radiology, Childrens Hospital Los Angeles, 4650 Sunset Blvd, Los Angeles, CA 90027. Articles and photographs accepted for publication will bear the contributor’s name. There is no charge for reproduction and printing of color illustrations.