Focal xanthogranulomatous pyelonephritis presenting as renal tumor

Sir,

A 6-month-old baby was referred to our hospital with a history of hematuria and an abdominal lump. The community pediatrician had found a renal lump on the left side and requested for an ultrasound which revealed a polar multicystic lesion in the left kidney. He had remained in the nursing home and was administered intravenous antibiotics for 2 weeks. His general and systemic examination was unremarkable except for the ballotable lump in left flank. The blood parameters were within the normal limits. The urine examination demonstrated red blood cells in full field and culture was sterile. An intravenous contrast-enhanced CT scan was performed which revealed a polar lesion in the left upper pole with typical appearance of multilocular cyst or cystic partially differentiated nephroblastoma (CPDN), which is a variant of Wilms' tumor [Figure 1].

The infant underwent upper pole partial nephrectomy under hypotensive anesthesia with cooling and temporary vascular clamping of kidney. Retrograde pyelography was done and methylene blue was added to the contrast to detect any leak after closure of collecting system following transaction of renal parenchyma. This technique helps in detecting and preventing postoperative urine leak, the commonest complication after partial nephrectomy. Double J stenting was also done to reduce the complication of urine leak.

The child made a smooth recovery and was discharged on the third post-operative day. The stent was removed 8

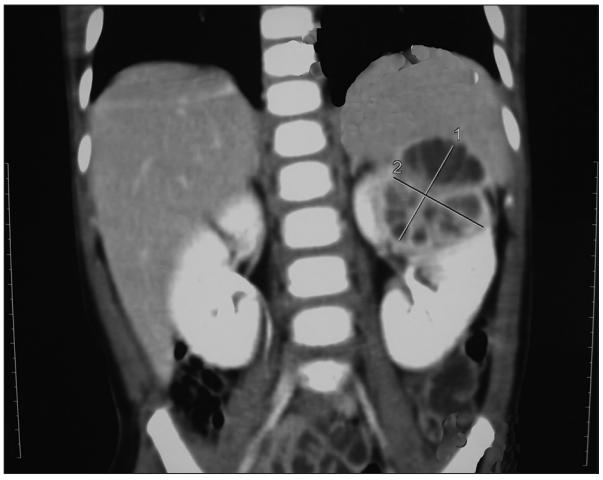

Figure 1: Computed tomography scan of abdomen with contrast, showing multiloculated cyst in upper pole of left kidney

weeks later. The resected specimen on histopathology was reported as focal xanthogranulomatous pyelonephritis (XGPN). He has remained on annual follow-up and is now 3 years old. The Dimercaptosuccinic acid (DMSA) scan performed at 1 year follow-up confirmed good perfusion and renal function in the lower half of the left kidney.

Focal multicystic polar lesion in the kidney is an uncommon condition seen in pediatric practice. The diagnosis in this circumstance, unless proven otherwise, must remain multilocular cyst or better understood as CPDN. This lesion is a variant of Wilms' tumor with best prognosis among all the renal tumors in children. Treatment is early and involves complete resection of the tumor. In the last few years, nephron-sparing surgery for this condition has been reported to have favorable results.[1,2] In our case, the resected specimen was reported as focal XGPN, much to our surprise.

Focal XGPN is rare in children. It is usually the result of chronic infection, usually due to *Proteus* spp. or *E. coli,* where the renal parenchyma undergoes cystic necrosis and is partially or completely replaced by lipid-laden foam cells. In the typical disease, it is associated with staghorn calculus and presents in middle-aged women.[3] Focal XGPN has been reported infrequently as isolated case reports misdiagnosed as a renal tumor, as in our case.[4]

The pre-operative diagnosis of focal XPGN is difficult to make by radiology and needle aspiration cytology and biopsy. Previous errors have been reported.[5] Therefore, the best approach remains resection and histopathological evaluation of the resected specimen. In our case, we resorted to conservative nephron-sparing surgery, therefore, we were able to preserve the normal part of the left kidney, confirm diagnosis, and prevent prolonged hospitalization.

S. Shinde, D. K. Kandpal, S. K. Chowdhary

Division of Pediatric Urology, Apollo Centre for Advanced Pediatrics, Indraprastha Apollo Hospitals, Sarita Vihar, New Delhi, India

Address for correspondence:
Dr. Sujit Kumar Chowdhary,
Division of Pediatric Urology, Apollo Centre for Advanced Pediatrics, Indraprastha Apollo Hospitals, Sarita Vihar, New Delhi - 110 044, India.
E-mail: sujitchowdhary@hotmail.com

References

1. Marszalek M, Ponholzer A, Brössner C, Wachter J, Maier U, Madersbacher S. Elective open nephron-sparing surgery for renal masses: Single-center experience with 129 consecutive patients. Urology 2004;64:38-42.
2. Okada T, Yoshida H, Matsunaga T, Kouchi K, Ohtsuka Y, Saitou T, *et al.* Nephron-sparing surgery for multilocular cyst of the kidney in a child. J Pediatr Surg 2003;38:1689-92.
3. Chuang CK, Lai MK, Chang PL, Huang MH, Chu SH, Wu CJ, *et al.* Xanthogranulomatous pyelonephritis: Experience in 36 cases. J Urol 1992;147:333-6.
4. Hugosson C, Ahmed S, Sackey K, Akhtar M. Focal xanthogranulomatous pyelonephritis in a young child. Pediatr Radiol 1994;24:213-5.
5. Kumar N, Jain S. Aspiration cytology of focal xanthogranulomatous pyelonephritis: A diagnostic challenge. Diagn Cytopathol 2004;30:111-4.

Access this article online	
Quick Response Code:	Website: www.indianjnephrol.org
	DOI: 10.4103/0971-4065.107219