Clinical Characteristics and Outcomes of Children with Unilateral Multicystic Dysplastic Kidney: A Cohort Study

Original Article

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ABSTRACT

OBJECTIVES

To study the clinical profile and outcomes of children with unilateral multicystic dysplastic kidney (MCDK).

METHODS

We assessed the clinical features and extrarenal manifestations in children with unilateral MCDK. These children were followed up to ascertain involution, compensatory hypertrophy and progression of chronic kidney disease (CKD) stage.

RESULTS

We enrolled 106 children with unilateral MCDK which was detected antenatally in 98 (92.4%), while evaluating for urinary tract infection in three (2.8%), and incidentally in five (4.7%) children. Abnormalities in the contralateral kidney and extrarenal manifestations at initial presentation were detected in 30 (28.3%) and 15 (14.2%), respectively. At a median (IQR) follow-up of 60 (32, 87) months, 34 (32.1%) children demonstrated complete involution of the MCDK, while 72(67.9%) showed compensatory hypertrophy in the contralateral kidney. The median age at involution of MCDK was 48.5 (33, 86.5) months. Twenty-two (20.7%) children had non-regression of MCDK, and two (1.9%) underwent nephrectomy. Eight (7.5%) children developed hypertension and two children were detected to have proteinuria. One child, each, progressed to CKD stage 2 and stage 3a; and another child (0.9%) progressed to end stage kidney disease. None of the patients developed malignant transformation.

CONCLUSIONS

Majority of cases (92.4%) of MCDK had been detected antenatally. The rate of involution was 32.1% at a median follow-up of 60 months. Although, 28.3% of cases of MCDK had abnormalities in the contralateral kidney, progression of CKD to a higher stage occurred only in three (2.8%) cases.

Keywords: Chronic kidney disease · Compensatory hypertrophy · Involution · Renal disease

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