CLINICAL FEATURES AND PROGNOSIS OF MULTICYSTIC DYSPLASTIC KIDNEYS IN CHILDREN

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Background

To evaluate clinical features, complications and prognosis of multicystic dysplastic kidneys (MCDK) in children.
Fig. 1 shows ultrasound image of MCDK and Fig. 2 shows native appearance of MCDK.

Methods

In this retrospective study, clinical features and prognosis of 80 children with unilateral MCDK were analysed. They were evaluated at the Clinical department of nephrology at University Children's Hospital Ljubljana between years 2012 and 2019. Data were obtained from electronic health care records. Mean follow-up time was 7,8 years (standard deviation 5,2).

Results

- There were 50 boys (62,5 %) and 30 girls (37,5 %) with unilateral MCDK.
- They were detected **prenatally** with ultrasound in 50 of them (62,5 %), in the first months of life in 13 of them (16,3 %), data were not available in others.
- None of them had hypertension.
- 35 children (43,8 %) had **associated congenital genitourinary anomalies,** most commonly vesicoureteral reflux (16,3 % of them), followed by cryptorchidism (15 %) and urinary tract dilatation (8,8 % of them). 6,3 % of them had chromosomopathy (Fig. 3).
- 8 children (10 %) had **urinary tract infection(s)**.
- **Kidney function** was normal in all of them except in one (due to dysplasia of the contralateral kidney), in 4 of them no data were available due to technical reasons.
- **Urinalysis** was normal in 72 children (90 %) while 5 % of them had microhematuria, 2,5 % proteinuria and one child had both.
- **Family history** was positive on anomalies of kidney and urinary tract in 17 of them (21,3 %).
- We observed **spontaneous involution** of multicystic dysplastic kidneys in 30 children (37,5 %), with mean age of involution at 3,9 years (standard deviation 3,4).
- **Nephrectomy** was done in 10 patients (12,5 %).

Conclusions

Unilateral multicystic dysplastic kidney has a very good prognosis if the contralateral kidney is normal. It affects boys more commonly than girls. Most of them are detected prenatally or very early in life. Associated congenital genitourinary anomalies are common. Most of these children do not suffer from urinary tract infections, hypertension, kidney dysfunction or other complications. Spontaneous involution relatively often occurs in the first years of life in these children.

Fig. 1 Ultrasound image of multicystic dysplastic kidney

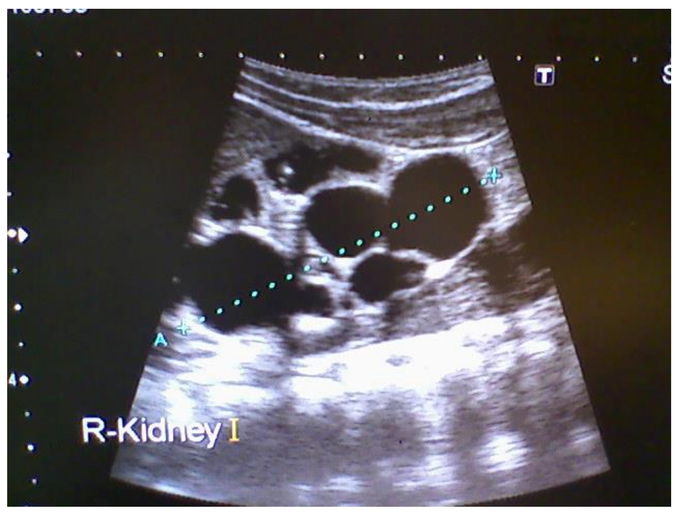

Fig. 2 Native appearance of multicystic dysplastic kidney

Reference: Examples of Renal Pathological Abnormalities in Children. In: Kaplan BS, Meyers KEC. Pediatric Nephrology and Urology. The Requisites in Pediatrics. Philadelphia: Mosby Inc.; 2004.

Fig.3 Most common associated congenital genitourinary anomalies in children with multicystic dysplastic kidney (MCDK)

Legend: VUR - vesicoureteral reflux; UTD – urinary tract dilatation; UTI – urinary tract infection
(data presented as proportions, in %)