

A case of prenatal diagnosis of urinary abnormality

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Objective

Multicystic dysplastic kidney disorders (MDK) is the commonest cause of abnormally enlarged kidney, diagnosed on antenatal ultrasound. MDK is typically unilateral disorders.

Methods

We presented a case of fetal urinary malformation detected in first trimester of pregnancy. We evaluated the prenatal diagnostic methods (ultrasound, MRI, fetal karyotype) and fetal outcome in a prenatal form of MDK.

Results

A 27-year old primigravida was referred at 12+4 weeks of single gestation for a routine ultrasound exam. None of the parents reported any family history of congenital malformations. Biometry was consistent with the gestational age, and nuchal translucency was below percentile 95th according CRL and LMP. Anechogenic form, located below the level of stomach on left side was detected (picture 1). The similar image was found in the 18 and 22 weeks of gestation (picture 2 and 3). The ultrasound image wasn't typical for MDK. MRI examination was performed (picture 4 and 5) and MRI's diagnosis was MDK. A normal karyotype was obtained by amniocentesis. MDK was given as the most probable diagnosis. By cooperation of gynaecologist, radiologist, geneticists and nephrologist, the pregnancy was continued. The ultrasound assessment was performed in 4 week intervals. In 38th week of gestation was delivered male baby (3250g/51cm and Apgar score of 7/9). Nine months after delivery, the baby has normal physical and neural development without any complication (hypertension, infections etc.).

Conclusion

Isolated unilateral MKDK has good prognosis. Bad prognosis is linked to association with other anomalies as well as to bilateral MCDK. Prenatal diagnosis of renal and urinary tract malformations improves perinatal management and the prognosis of the affected child. The objective of prenatal ultrasound is to describe the type of anomaly as accurately as possible, to exclude associated malformations and to screen parameters predictive of bad renal function, allowing for a multidisciplinary perinatal approach. First trimester ultrasound gives good directions for further monitoring of the fetus by morphological deviations. The MRI was not superior versus ultrasound.

