

Isolated Multicystic Dysplastic Kidneys - Prenatal diagnosis, accuracy and outcomes

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INTRODUCTION

- Multicystic dysplastic kidney (MCDK) is one of the most common renal anomalies detected prenatally with an incidence of 0.2–1/1000 live births
- Prognosis of MCDK depends on the presence of associated anomalies and function of the contralateral kidney.
- Bilateral MCDKs and those associated with other anomalies carry a poor prognosis.
- Isolated unilateral MCDK has a good prognosis as chromosomal aberrations are low and most of them involute.

OBJECTIVE

To review the prenatally diagnosed isolated MCDKs in our tertiary care referral center, the detection accuracy, postnatal outcomes, and surgical management

DESIGN

A retrospective 10-year cohort including all the MCDKs that were prenatally diagnosed in our Maternal & Fetal Medicine referral center

METHOD

The data was collected retrospectively from the electronic medical records and analyzed using SPSS software. The postnatal outcome was obtained by personal interrogation and reviewing the baby's medical records.

RESULTS

- There were a total of 18 cases during the study period January 1, 2013 to January 1, 2023.
- Out of the 18 cases of MCDK, 8 patients (44.4%) had isolated unilateral MCDK, 3 patients (16.6%) had isolated bilateral MCDK while the rest 7 patients (38.8%) had associated anomalies.
- Those with bilateral MCDKs and associated anomalies underwent medical termination of pregnancy.
- With due counseling, all the patients with isolated unilateral MCDK continued their pregnancy and the findings were confirmed postnatally with 100% accuracy.
- The natural history of isolated MCDK is encouraging in the majority of babies.

Isolated MCDK

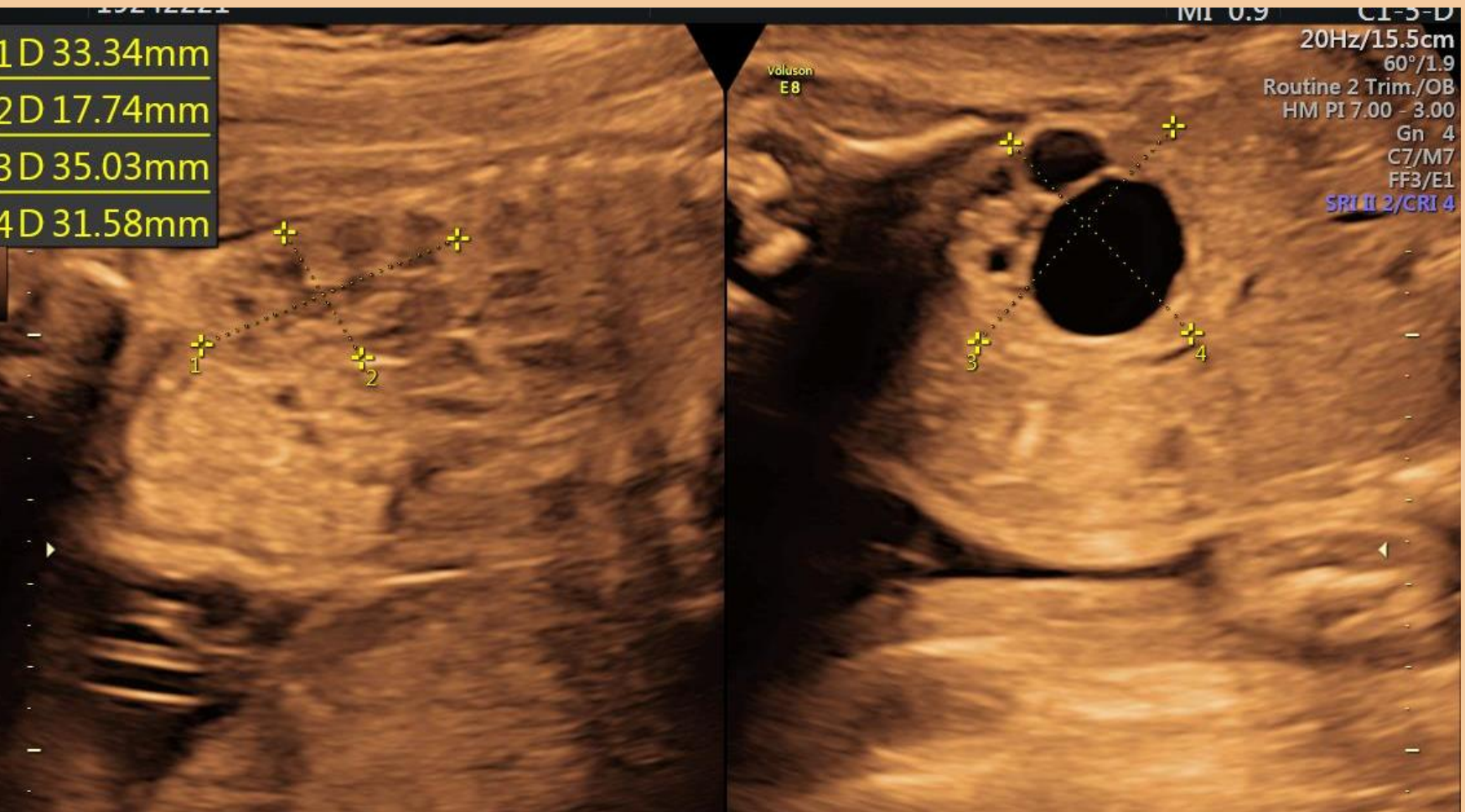
- All patients continued pregnancy
- Findings were confirmed postnatally
- Postnatally all babies are doing well
- Completely involuted MCDK in 37.5% & shrinkage in 50%
- One baby had to undergo nephrectomy at 4 months of age in view of increasing size of the nonfunctioning kidney; however, is doing well post-nephrectomy
- All of them are normotensive with normal glomerular filtration rate and no features of any malignant transformation

Bilateral MCDK & those with other anomalies

- Underwent MTP

ULTRASOUND IMAGE OF N/MCDK

NORMAL KIDNEY



MCDK

CONCLUSION

- Prenatal ultrasonography has excellent accuracy in the diagnosis of MCDK.
- Detailed evaluation to assess the contralateral kidney and rule out extrarenal anomalies form an integral part of workup and is crucial for counseling in isolated cases.
- The postnatal prognosis of isolated unilateral MCDK prognosis is promising with the majority of babies requiring close and periodic follow-up only.
- Hence it is pertinent to alleviate the fear of parents with appropriate counselling and encourage them to continue the pregnancy in isolated unilateral MCDK.

REFERENCES

- Becker AM. Postnatal evaluation of infants with an abnormal antenatal renal sonogram. *Curr Opin Pediatr*. 2009;21(2):207-213
- Balasundaram M, Chock VY, Wu HY, Blumenfeld YJ, Hintz SR. Predictors of poor neonatal outcomes in prenatally diagnosed multicystic dysplastic kidney disease. *J Perinatol [Internet]*. 2018;38(6):658–64