

# **Prenatal and Early Postnatal Outcomes for Fetuses with Anatomic or Functional Renal Agenesis**

## **Introduction**

There has been increased interest in fetal intervention for previously “lethal” anomalies such as bilateral renal agenesis or other diagnoses associated with in utero renal failure (functional renal agenesis). While there have been rare reports of successful births following intervention, there is a paucity of data regarding the risks, benefits, and outcomes of intervention. To address this gap, this study reviewed our experience with fetal intervention for anatomic or functional renal agenesis.

## **Methods**

A retrospective review was conducted for patients referred to the Colorado Fetal Care Center (CFCC) for evaluation of complex CAKUT anomalies. Patients were included if they had severe oligohydramnios associated with bilateral renal agenesis, renal dysplasia, or other etiologies consistent with primary renal failure. Eligibility for amnioinfusion was determined by a multidisciplinary team including social work and psychology.

## **Results**

7 patients met eligibility criteria. Mean age at presentation was 29 years. 86% (6/7) of patients identified as white, and 86% (6/7) of patients were married. Postnatal data was available for 5/7 cases. Respiratory intervention occurred in 3/5 cases. 2/5 cases survived to dialysis. 30-day mortality was 60% (3/5). 1-year mortality was 80% (4/5).

## **Conclusions**

Individuals carrying a pregnancy complicated by anatomic or functional renal agenesis face a difficult choice when considering intervention. In this small cohort, patients considered eligible were more likely to be white and married. While these diagnoses are considered lethal without intervention, intervention is associated with significant morbidity and mortality. These findings reinforce that treatment of these cases should be considered experimental and large-scale multicenter trials are needed to determine the optimal indications for prenatal intervention.