

## **Congenital renal and urinary tract anomalies in children**

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Congenital abnormalities of kidney and urinary tracts (CAKUT) are clinically challenging, because they account for the most cases of paediatric end stage renal disease. If we detect those anomalies, early patients could be benefited from early intervention to reduce morbidity and mortality. Isotope renal imaging plays a major role in diagnosing those abnormalities because it can detect both structural and functional renal abnormalities. The aim of this study is to assess the frequency of congenital renal abnormalities presented to a single unit for isotope imaging.

This study included 646 subjects (421 boys and 225 girls) below 12 years who were presented to Nuclear Medicine Unit, Faculty of Medicine, University of Peradeniya, in the period between January 2015 and June 2016 to undergo renal isotope imaging. Children's clinical records were reviewed to gather information on age, sex and imaging findings.

There were 196 (30.3%) children with congenital kidney and urinary tract anomalies in this study. The most common congenital abnormality detected was vesicoureteric reflux in 67 (10.4%) children. Pelviureteric junction obstruction was detected in 47 (7.3%) and unilateral agenesis of the kidney/single kidney was identified in 28 (4.3%) cases. There were 13 (2 %) children with ectopic kidneys, 19 (3%) children with posterior urethral valves and 14 (2.2%) children with congenital small kidneys/dysplastic kidneys. Horseshoe kidneys were found in 6 (1%) children and mal-positioned and mal-rotated kidneys were found in 2 (0.3%) children.

CAKUT cover a wide range of structural abnormalities which can occur as a part of a syndrome or as an isolated abnormality. This study showed that approximately one third (30.3%) of the children who were investigated for urinary tract diseases were confirmed to have abnormalities in the kidney and urinary tract. Chronic kidney disease is becoming a major health issue in Sri Lanka. Some of these may be resulting from undiagnosed or late intervened CAKUT.

It is important to detect CAKUT to intervene early and to reduce the burden of chronic kidney disease in Sri Lanka.