

# Recommendations for Postnatal Investigation of Antenatal Hydronephrosis

Dilation of the fetal renal pelvis (antenatal hydronephrosis) is frequently detected by antenatal ultrasound, occurring in 1 – 2% of pregnancies. Our objective was to develop an evidence-based algorithm for the postnatal investigation of infants with asymptomatic antenatally detected hydronephrosis in British Columbia. The goal of these recommendations is to ensure that all infants with clinically significant antenatal hydronephrosis receive timely and appropriate postnatal evaluation; with those at risk of progressive renal dysfunction secondary to urinary tract obstruction (i.e. Posterior Urethral Valve) evaluated on an urgent basis. It is intended as a guide to postnatal imaging for medical professionals counseling families of fetuses with antenatal hydronephrosis and/or caring for newborns and infants. For antenatal referral guidelines, please contact the Fetal Diagnostic Service or your regional Maternal Fetal Medicine providers.

The algorithm that follows is based on evidence and recommendations from current literature and on local practice and expertise in managing infants with antenatally detected hydronephrosis. It is the consensus of delegates from the Divisions of Maternal Fetal Medicine<sup>1</sup> and Medical Genetics<sup>2</sup> of BC Women's Hospital and the Divisions of General Pediatrics<sup>3</sup>, Pediatric Nephrology<sup>4</sup>, Pediatric Urology<sup>5</sup> and Department of Radiology<sup>6</sup> of BC Children's Hospital.

<sup>1</sup> C Mayer MD

<sup>4</sup> DG Matsell MD

<sup>2</sup> MS Patel MD

<sup>5</sup> K Afshar MD

<sup>3</sup> A van den Brekel MD

<sup>6</sup> H Bray MD, D Jamieson MBBS

March 2015

## References:

1. Lee RS et al. Antenatal hydronephrosis as a predictor of postnatal outcome: a meta-analysis. *Pediatrics* (2006) 118, 586-593
2. Psooy K, Pike J. Investigation and management of antenatally detected hydronephrosis. *Can Urol Assoc J* (2009) 3, 69-72
3. Nguyen HT et al. The Society for Fetal Urology consensus statement on the evaluation and management of antenatal hydronephrosis. *Journal of Pediatric Urology* (2010) 6, 212-23
4. Nguyen HT et al. Multidisciplinary consensus on the classification of prenatal and postnatal urinary tract dilation (UTD classification system). *Journal of Pediatric Urology* (2014) 10, 982-999