Focus on Subspecialties: Consensus statement aids in classifying, managing urinary tract dilation:

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In March 2014, a multidisciplinary committee was charged with addressing several key areas pertaining to urinary tract dilation, including lack of uniform nomenclature to define the condition, standardization of ultrasound technique/reporting, defining normative values both prenatally and postnatally, and development of an initial evaluation and management algorithm.

Given the lack of agreement on nomenclature among specialists (maternal, fetal, radiologist, pediatric nephrologist, urologist), a decision was made to use the term “urinary tract dilation” (UTD). This term was felt to be all-inclusive and would replace more traditional terms such as hydronephrosis, pelviectasis, pyelectasis and pelvic fullness, which frequently conveyed different meanings to different people.

Seven common and readily available ultrasound features were identified to help stratify severity of disease, including measurement of renal pelvis diameter and subjective assessment of the integrity of renal parenchyma, calyces, ureter and bladder.

Consistent reporting of prenatal and postnatal ultrasounds was felt to be of paramount importance to provide proper documentation for clinical and research purposes. Prenatally, the spine should be in the 6 o’clock or 12 o’clock position with measurement of the renal pelvis taken at the largest diameter. Postnatally, consistency of supine or prone positioning was encouraged, with measurements taken in the transverse plane. The use of a 7-point system incorporates attributes of the more common grading systems, which utilize objective measurements (e.g., anterior-posterior renal pelvic dilation [APRPD]) and subjective assessments (e.g., Society for Fetal Urology system).

The group defined normative values for prenatal and postnatal imaging, the most noteworthy was the allowance of up to 10 mm APRPD for postnatal UTD. The primary goal
of these definitions is to allow for the test to remain sensitive enough to identify disease while mitigating over-testing of non-pathologic or physiologic renal pelvis dilation. The prenatal thresholds are stratified by two gestational age time points that take into account physiologic change with gestation and build on earlier values set forth in studies that focused on APRPD. The postnatal value was chosen in recognition that some renal pelvis dilation was physiologic and not pathologic.

A risk stratification system was developed to allow for directed evaluation and management based on UTD severity. Prenatally, two levels of risk were agreed upon: A1 (low risk) and A2-3 (increased risk); postnatally, three levels of risk were defined: P1 (low), P2 (moderate) and P3 (high) (see table). Practitioners are encouraged to report the risk stratification score (A1/2-3, P1-3) along with the 7-point description.

Prenatal management recommendations for A1 call for performing an additional ultrasound after 32 weeks gestational age, while serial four- to six-week imaging was encouraged for A2-3. Postnatal imaging was recommended at 48 hours for all patients unless clinical picture dictated the need for more immediate evaluation (i.e., suspicion of bladder outlet obstruction).

Postnatal evaluation also was stratified by risk and allowed for physician discretion based on the lack of substantive evidence to endorse implementation of prophylactic antibiotics, lower urinary tract imaging and functional renal scans (see article referenced above).

The development of this common terminology and classification system is a move in the right direction toward improving our understanding of this condition as well as curtailing both parental concerns and escalated costs due to over-testing.
Dr. Herndon is a member of the AAP Section on Urology Executive Committee and co-author of the consensus statement.

Resource
C.D. Anthony Herndon, M.D., FAAP, and Poyyapakkam Srivaths, M.D., FAAP, will participate in a point-counterpoint session titled “Perinatal Urinary Tract Dilatation: Intervention or Observation? (D2166)” from 4-5 p.m. Sunday, Oct. 23 at the AAP National Conference & Exhibition in San Francisco.

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