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72153 - Postnatal Evaluation of Prenatally Detected Hydronephrosis - Results of a Swedish regional second trimester screening program 2019-2022

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Introduction: Hydronephrosis is a common finding at the second trimester ultrasound. In 2018, a new guideline for antenatally detected hydronephrosis was implemented in Sweden. All fetuses with an anterior posterior diameter of the renal pelvis exceeding six mm at the 2nd trimester ultrasound should have additional follow-up.

Aim: To evaluate the new national guideline and compare outcomes of children with hydronephrosis detected during 2nd trimester ultrasound to those diagnosed before the age of two, who went undetected during pregnancy.

Method: This prospective cohort study investigated fetuses, with hydronephrosis at the 2nd trimester ultrasound between 2019-11-01 to 2022-10-31 at Sahlgrenska University Hospital. In addition, retrospective data from children, with corresponding ICD-codes at age <2y, who were not detected antenatally, was collected.

Result: The incidence of hydronephrosis during the 2nd trimester ultrasound was 0.55%(n=171). Of 206 children with hydronephrosis before the age of two, 78.2%(n=161) had antenatal diagnosis. 27.4%(n=32) of those with antenatal hydronephrosis had persisting abnormality at two years, 5.2%(n=8) required surgery, and 8.4%(n=13) were hospitalized for urinary tract infection(UTI). In comparison, among children detected postnatally, 12.8%(n=6) required surgery and 70.2%(n=33) were hospitalized for UTI. Only one patient had an eGFR below normal. The most common diagnoses in the antenatal group were multicystic dysplastic kidney, duplex with or without ureterocele, vesicoureteral reflux and pelviureteric junction obstruction, whereas most children detected postnatally had vesicoureteral reflux.

Discussion: Detection rate of hydronephrosis at 2nd trimester ultrasound is good and children antenatally detected have favorable outcomes. This study contributes to accurate prognostic information.