

EP05.26: Third-trimester presentation of fetal lower urinary tract obstruction (LUTO) following normal anatomical scans

Yael Borovitz^{1,2}, David Ben Meir^{1,2}, Ron Bardin^{2,3}, Oded Volovelsky⁴, Guy Hidas⁴, Amir Shimonov⁴, Hadas Miremberg^{2,6}, Roxanne Klepper^{2,5}, Karina Krajden Haratz^{2,6}, Yinon Gilboa^{2,3}, Sharon Perlman^{2,6}

¹Schneider Children's Medical Center, Petach Tikva ²Gray School of Medicine, Faculty of Medical & Health Sciences, Tel Aviv University ³The Helen Schneider Women's Hospital, Rabin Medical Center, Petach Tikva ⁴Hadassah Hebrew University Medical Center, Jerusalem ⁵Dana-Dwek Children's Hospital, Tel Aviv Sourasky Medical Center ⁶Lis Maternity & Women's Hospital, Tel Aviv Sourasky Medical Center. All centres in Israel.

Background

Lower urinary tract obstruction (LUTO) is usually suspected in the first or second trimester, when megacystis, bilateral hydronephrosis and the 'keyhole' sign are present.

A subset of male fetuses develop LUTO later, after a normal second-trimester anatomical survey. This late-onset presentation is poorly characterised and may be mistaken for transient or benign urinary tract dilatation.

Objective

To describe the prenatal presentation and postnatal outcomes of fetal LUTO first detected in the third trimester following normal second-trimester anatomical scans.

Methods

Multicentre retrospective study across two tertiary referral centres over ten years.

Male fetuses diagnosed with LUTO in the third trimester after a documented normal second-trimester scan were included. Prenatal imaging, obstetric and postnatal renal outcomes were reviewed.

Results

Of 45 male fetuses with third-trimester hydroureteronephrosis and bladder dilatation after normal scans, 7 had postnatally confirmed LUTO.

Gestational age at presentation ranged from 28 to 36 weeks. The keyhole sign was absent at presentation in most cases, appearing during follow-up or only transiently during micturition.

Four fetuses developed oligohydramnios and two developed perirenal urinomas.

Posterior urethral valves were confirmed in 6 fetuses and anterior urethral valves in 1.

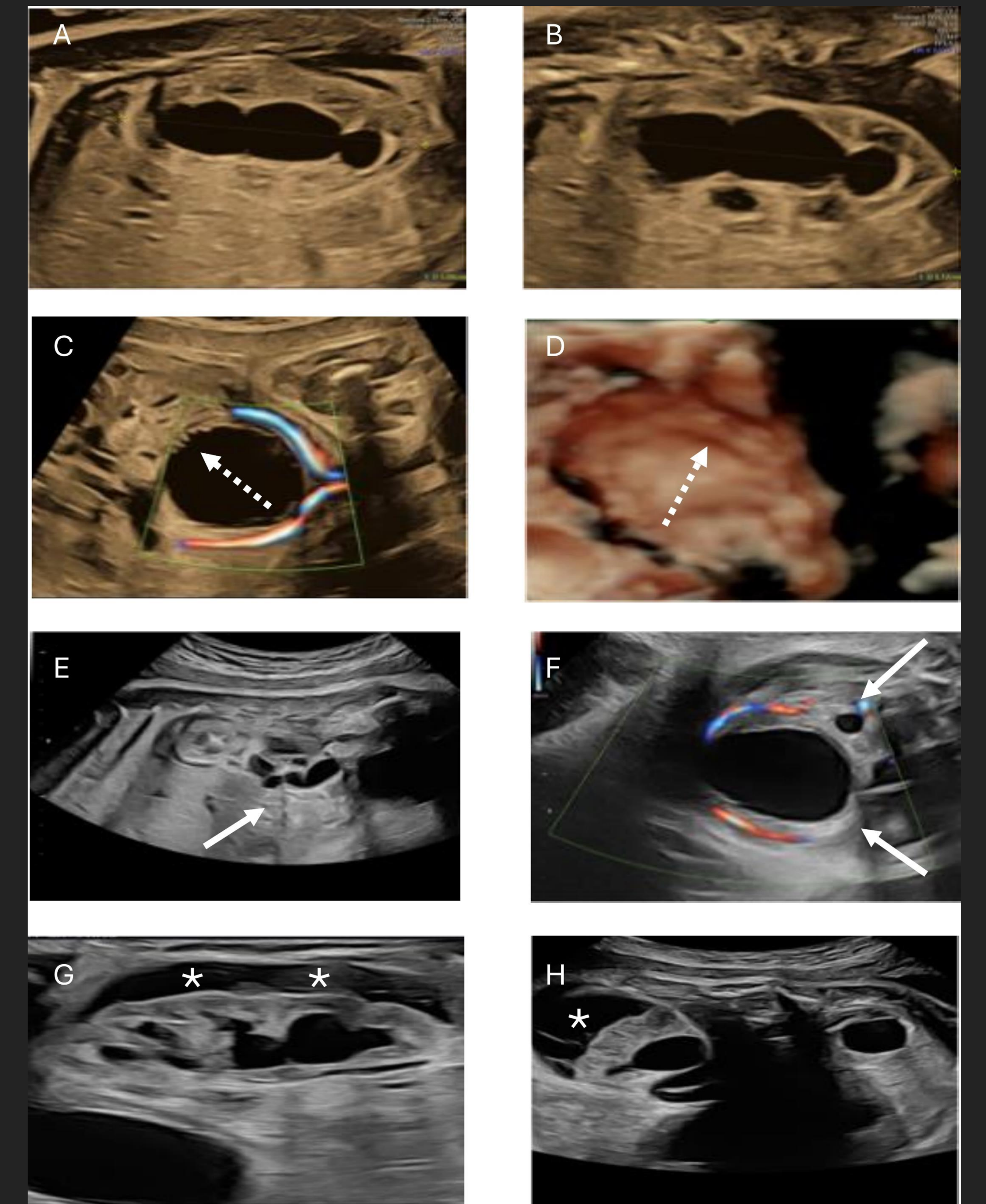
All neonates underwent postnatal valve ablation and none required renal replacement therapy.

Neonatal creatinine was elevated in 6 of 7 neonates at birth and normalised in all cases over a follow-up of 1 to 9.5 years.

Conclusion

Third-trimester LUTO following normal anatomical scans is a distinct late-onset phenotype with preserved renal development despite potential for rapid deterioration.

These findings support a time-dependent mechanism distinct from early-gestation obstruction. Close third-trimester surveillance and multidisciplinary management are essential for favourable outcomes.



A case of posterior urethral valves presenting in the third trimester following two normal scans, with progressive hydronephrosis resulting in urinoma. Prompt delivery and treatment led to a normal renal outcome.

drsharonperlman@gmail.com