

## Outcomes of cases diagnosed with distended fetal bladder

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### Objective

We explored the long-term outcome of fetuses presenting with an enlarged bladder antenatally.

### Methods

Cases where pregnant women with antenatal ultrasound scans showing distended fetal bladder at Guy's & St. Thomas' hospital fetal medicine unit (2004-2018) were identified from astraia software. Those cases with complete outcomes were included. Data collected include gestational age at diagnosis, liquor volume, and other urinary tract Ultrasound findings. Postnatal data was collected using badgernet and electronic patient records. This included livebirth, stillbirth, termination of pregnancy, postnatal Ultrasound findings, final diagnosis, serum creatinine, age at first surgical intervention, and last follow-up.

### Results

51 fetuses were included, diagnosed at the following gestational ages: <14 weeks – 11 (22%) 14-24 weeks – 26 (51%) >24 weeks – 14 (27%) Fourteen women (27%) opted to terminate the pregnancy after counselling. Excluding these cases, 5 pregnancies (14%) were lost as miscarriages or stillbirths, resulting in livebirth in 32 (86%) cases. One baby died in the neonatal period due to severe pulmonary hypoplasia. 4 patients had antenatal intervention (i. e. ) vesico-amniotic shunt. Among the pregnancies lost to termination/miscarriage/stillbirths, the commonest diagnosis, either by ultrasound or postmortem findings or both, is Posterior urethral valves (PUV) – 6. The associated abnormalities are Trisomies (2), spina bifida, sacrococcygeal teratoma, exomphalos (one each) and others. The commonest diagnosis among the survivors was Posterior urethral valve (15), vesicoureteric reflux (3), Duplex Kidneys (4), prune belly syndrome, meatal stenosis, anorectal malformation, Pelvic ureteric Junction Obstruction (PUJO) one each. One case did not have any pathology after delivery. The mean highest creatinine level (used as a measure of renal function) was 132 and fell to 47 at the latest measurement. Three patients developed chronic kidney disease and required a kidney transplant, two of them in PUV and the other one in the case of meatal stenosis. The incidence of abnormal bladder function (amongst those with pathology apparent at birth) was 50%.

### Conclusion

Most of the persistently dilated bladder cases are diagnosed in the second trimester. Posterior urethral valve is the commonest but not an exclusive diagnosis, resulting in livebirths in most cases when pregnancy is not terminated. 13% of the posterior urethral valve survivors developed chronic kidney conditions, necessitating a renal transplant.