

IMAGING AND ULTRASOUND VIDEO OF RUPTURED FETAL MEGACYSTIS – A CASE REPORT OF A RARE NATURAL PROGRESSION OF THE CONDITION

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Background

Fetal megacystis is defined as an enlarged bladder diameter more than 7 mm. The incidence of megacystis is one in 1,600 - 3,000, with a higher prevalence in male fetuses. Fetal megacystis is associated with karyotype anomalies in 7-20% of cases and is associated with significant fetal complications including oligohydramnios, renal failure and pulmonary hypoplasia. Fetal megacystis rupture is rare and has been reported in few case reports.

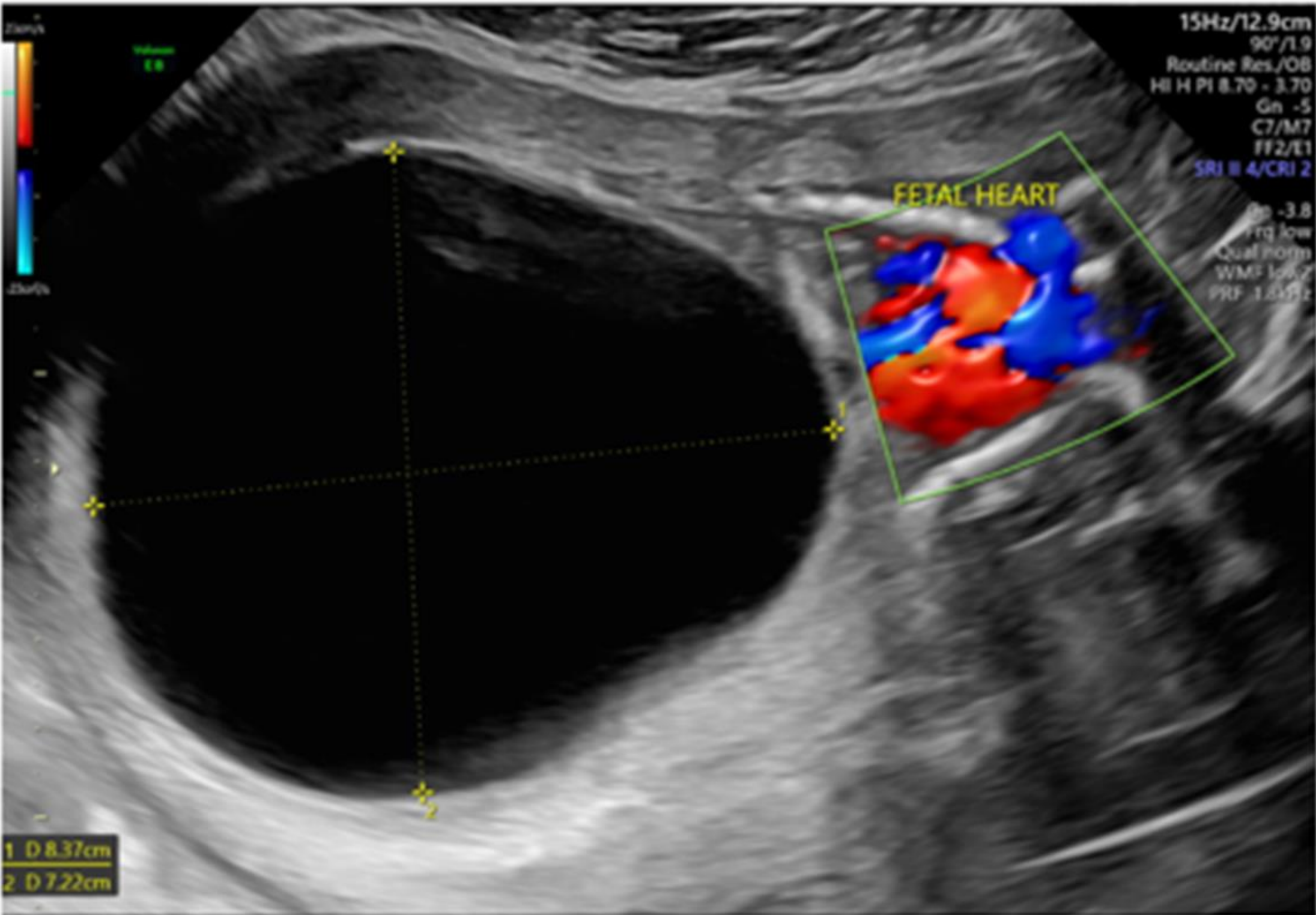
Presentation

Here, we present the case of a multigravida with a large megacystitis diagnosis at 20 weeks gestation. On transabdominal ultrasound anhydramnios was noted, with the bladder measuring 8.5 by 7.2 cm, bilateral echogenic kidneys and no other obvious structural abnormalities on ultrasound. At 26 weeks and 2 days the patient presented with premature preterm rupture of membranes. Ultrasound revealed ruptured megacystitis, ascites within the abdomen and grossly abnormal intraabdominal anatomy. The progression of the condition, from diagnosis to rupture, is depicted through ultrasound images, Figure 1. The patient elected for conservative management as an inpatient. The patient went into preterm labour at 28 weeks 5 days and delivered a liveborn male infant by spontaneous vaginal delivery. Early neonatal death was confirmed at 1 hour 24 minutes of life. Postnatal genetics reported normal male karyotype, microarray and exome sequencing.

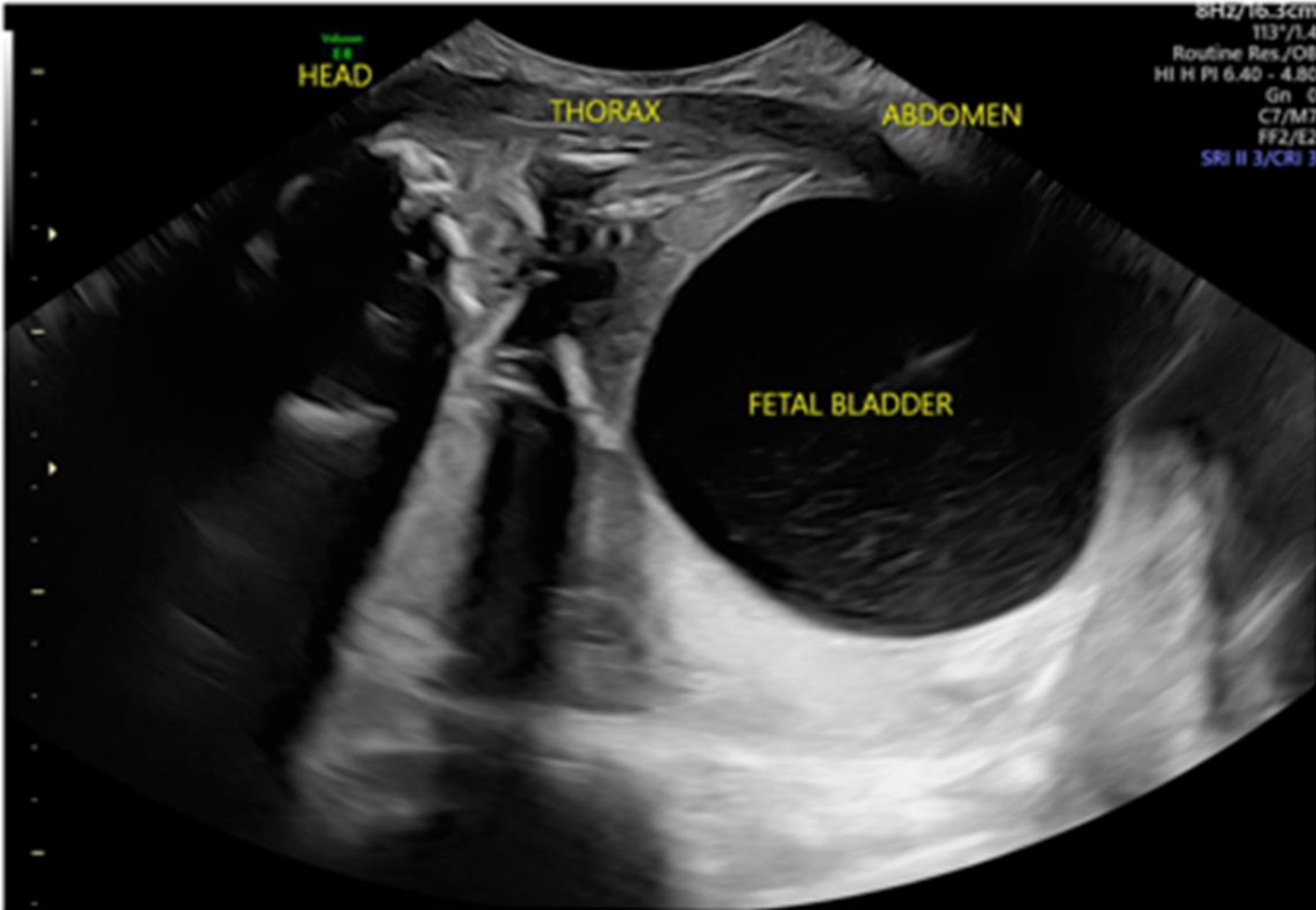
Conclusion

Fetal megacystitis rupture is rare and has been reported in few case reports. Late fetal megacystitis is associated with significant fetal complications including oligohydramnios, renal failure and pulmonary hypoplasia. Perinatal mortality is reported in 35-55% of cases due to oligohydramnios and associated pulmonary hypoplasia. In conclusion, fetal megacystitis is rare and can potentially result in significant neonatal morbidity and mortality.

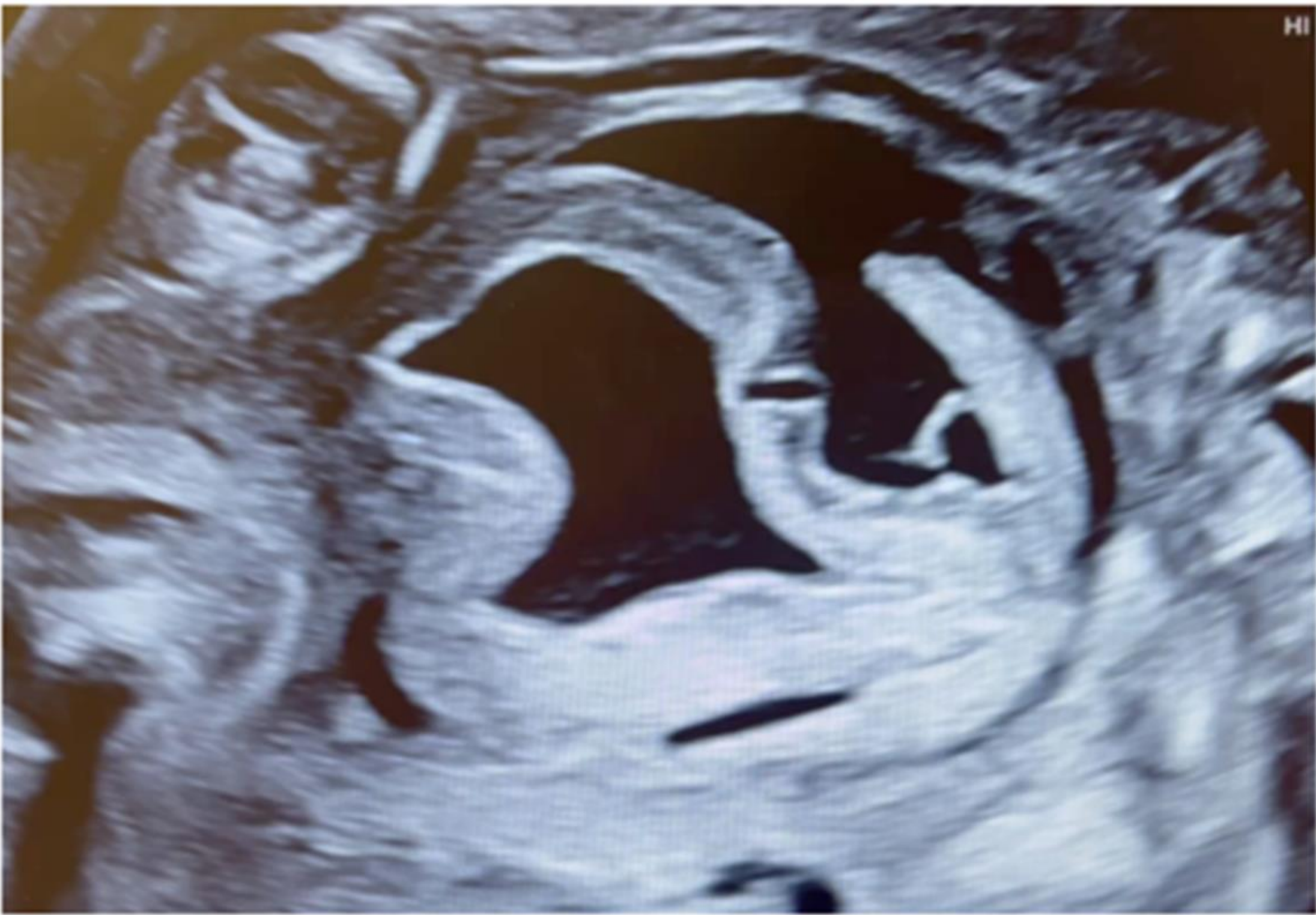
Ultrasound Imaging of the Natural Progression of Ruptured Fetal Megacystitis



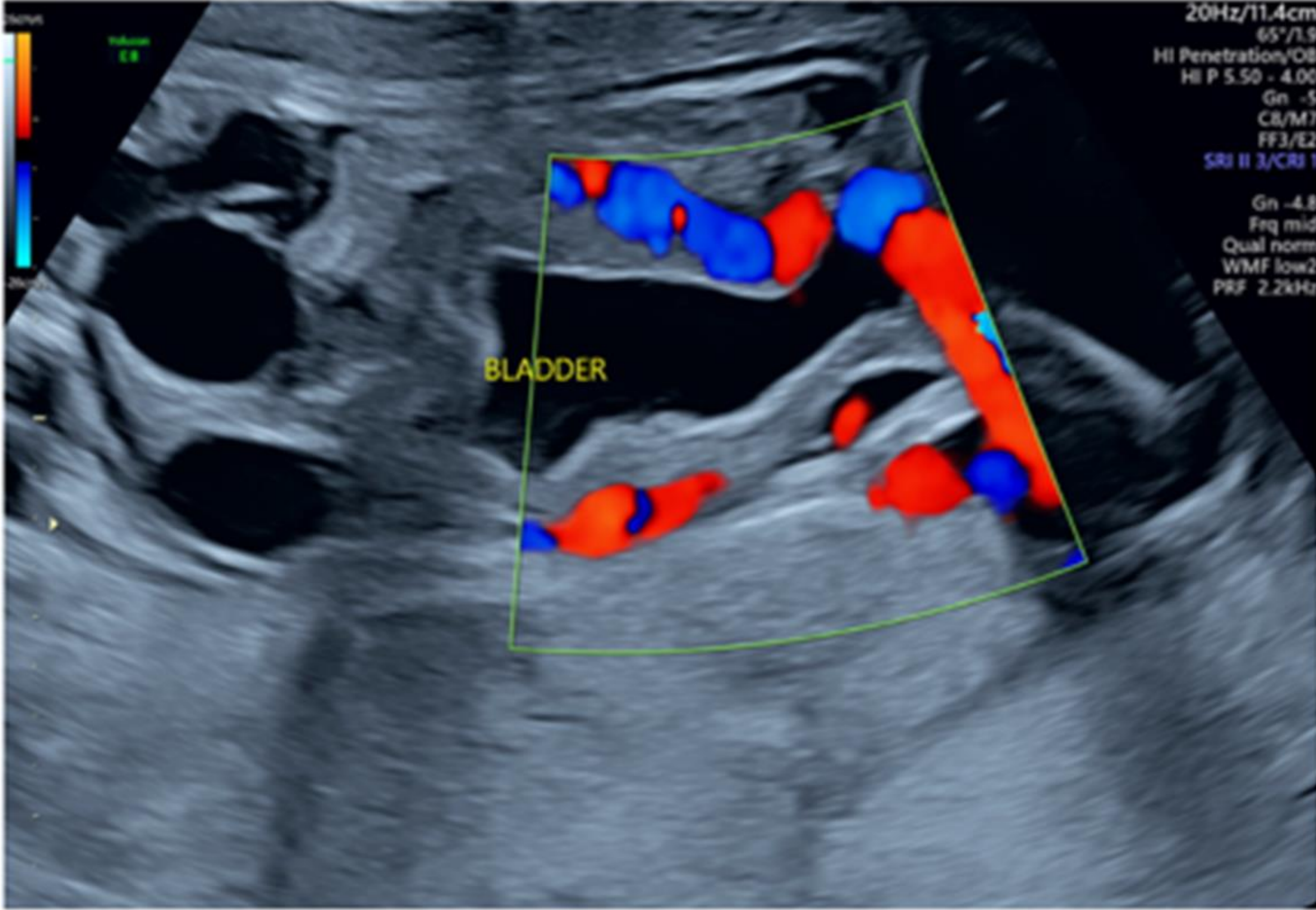
Transabdominal ultrasound 20+1 depicting Fetal Megacystitis and Anhydramnios



Transabdominal Ultrasound 23+2 showing Keyhole Sign



Transabdominal ultrasound 26+2 showing appearance of ruptured megacystitis and abnormal intra-abdominal anatomy



Transabdominal Ultrasound 27+2 showing pocket of fluid tracking from bladder