

other variants of intestinal obstruction. The use of the “whirlpool sign” and its three dimensional counterpart the “Barber-pole sign” have been used successfully in infants with high sensitivity and predictive value, establishing a definitive diagnosis of the condition. We present a case of a 52 year old primigravida who was evaluated due to complaints of decreased fetal movements. The fetal gray-scale sonogram showed a dilated bowel loop with the whirlpool sign, and the 3D Doppler study demonstrated a clockwise barber-pole sign, both of which were consistent with intestinal volvulus. The mother received betametasone for induction of lung maturity. Due to a non-reassuring pattern on fetal monitoring a cesarean section was performed. Laparotomy was performed shortly after birth, and a 360 degree distal ileum volvulus was observed. The necrotic intestine was resected and an ileostomy was made. Repeat laparotomy with resection of the ileocecal valve was subsequently required. The infant suffered from a short bowel syndrome, but is now doing well. This case further substantiates the importance of the clockwise whirlpool and barber-pole sign in the definitive diagnosis of prenatal volvulus. To the best of our knowledge, this is the first report of in utero volvulus diagnosed by 3D Doppler study.

OP13.08

Outcome of antenatally diagnosed fetal abdominal cysts

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Objectives: To investigate the natural history, associated abnormalities and outcome in fetuses diagnosed antenatally with abdominal cysts.

Methods: A retrospective study of all cases of antenatally detected fetal abdominal cysts was performed in patients referred to a tertiary unit between 1999 and 2007. Associated abnormalities, pregnancy outcome and infant follow-up were recorded.

Results: Fetal abdominal cysts were diagnosed in 65 cases. During the same time period pediatric surgery was required in 18 cases for a suspected fetal abdominal tumour of unknown origin. Only two of these cases were identified in the antenatal period on screening ultrasound scans. In both cases, the fetal abdominal cysts were detected on third trimester scans: one incidentally, the other associated with reduced fetal movement and polyhydramnios.

Conclusions: The majority of fetal abdominal cysts identified during mid-trimester ultrasound screening are of benign origin and resolve spontaneously without the need for surgical intervention. Cases requiring surgical intervention in the infant period are more likely to be required in cases where fetal abdominal cysts were identified on ultrasound in late pregnancy or where the cysts were related to other fetal structural abnormalities.

OP13.09

Association of isolated single umbilical artery with adverse perinatal outcome in 18,224 unselected patients

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Objectives: To determine the possible association between fetuses diagnosed with isolated single umbilical artery at 20–23 weeks gestation and intrauterine fetal growth restriction (IUGR), preterm

labour (PTL), and fetal distress in labour as a primary cause for operative delivery.

Methods: A retrospect study of all fetuses diagnosed with isolated single umbilical artery (no minor or major anomalies) between January 2003 to December 2007 in tertiary referral centre. Any referred case for second opinion had been excluded. Fetuses with single umbilical artery and associated anomalies had been excluded.

Results: Isolated single umbilical artery was diagnosed in 79/18224 (0.43%). In 4/79 (5%) had intrauterine fetal death, 3/79 (3.8%) had spontaneous preterm labour at 35, 34, 29 weeks gestation, in 3/79(3.8%) fetuses had intrauterine fetal growth restriction (<2.5 Kg at term).

After exclusion of intrauterine deaths (3 cases), the mean gestation at delivery was 38.7 (29–42) weeks. The mean birth weight at delivery was 3155(2558–4520) grams.

Regarding the mode & indication of delivery 53% of fetuses had spontaneous uncomplicated vaginal delivery while 47% had operative delivery. Caesarean delivery rate was 30% with emergency onset in 12.9%. Fetal distress in labour considered as a primary indication in 45% of caesarean deliveries.

Conclusions: in our series, fetuses diagnosed with isolated single umbilical artery, likely to have increased risk of intrauterine death (LR: 10) increased risk of operative delivery intervention and intrapartum fetal distress as a primary indication of operative delivery.

OP13.10

Perinatal outcome of 127 consecutive fetuses with single umbilical artery

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Objectives: To report the frequency of associated congenital abnormalities, aneuploidy as well as the pregnancy outcome of fetuses complicated by single umbilical artery (SUA).

Methods: A retrospective review of all ultrasound performed in our center between January 2001 and December 2007. Single umbilical artery was diagnosed in 127/26 883 cases.

Results: The prevalence of SUA was 0.47% in our population. Eighty-three fetuses had isolated SUA (65.3%) and 44 had associated findings (34.6%). In this group 10/44 had minor findings and 34/44 major anomalies (77.2%). Of these, 11 had an aneuploidy (11/34, 32.3%). We found 5 cases of trisomy 21 (3.9%), 4 of trisomy 18 and 2 of trisomy 13. Two patients declined cytogenetic study. There were 25 fetuses with SUA and congenital heart defects (CHD). Five had minor CHD, one of them in a trisomy 21 fetus. The further 20 cases were major CHD, 7 of them with abnormal karyotype. There were 8/127 (6.3%) cases of isolated major congenital heart defects.

Conclusions: In two-thirds of SUA, the cord abnormality will be isolated. When major abnormalities are associated, a high prevalence of aneuploidy was found, suggesting the need for amniocentesis in these cases. The presence of SUA also increase the risk of isolated major CHD.

OP13.11

The maxilla-nasion-mandibula angle at 16–34 weeks' gestation: An objective 3D ultrasound measurement for the anteroposterior relationship of the jaws

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