Introduction

- Anterior body wall defects broadly comprise of conditions such as:
  - **Gastrochisis** is characterised by intact umbilical cord and evisceration of bowel through a defect in anterior abdominal wall with no membranous covering.
  - **Omphalocele** is herniation of bowel, liver and other organs into intact umbilical cord, the tissues covered by peritoneal membrane.
  - **Limb body wall complex (LBWC)** is characterized by severe multiple congenital anomalies in the fetus with exencephaly/encephalocele, thoraco- and/or abdominoschisis (anterior body wall defects) and limb defects, with or without facial clefts.
  - **Ectopia Cordis** is defined as a portion or all of the heart being located in an extrathoracic position.
  - **Ectopia vesicae** refers to a herniation of the urinary bladder through an anterior abdominal wall defect.
  - **Cloacal exstrophy (EC)** is a major birth defect representing the severe end of the spectrum of the exstrophy-epispadias complex characterized by omphalocele, exstrophy, imperforate anus and spinal defects (also referred to as the OEIS complex), often associated with other malformations.

Aims

- To determine the antenatal risk factors and neonatal outcomes of fetuses detected with anterior abdominal wall defects.
- To compare the antenatal risk factors and neonatal outcomes in neonates with gastrochisis and omphalocele.

Methods

- Data of all mothers diagnosed with fetal anterior abdominal wall defects during year 2006 to 2012 was taken from Birth Defect Registry. Birth defect registry has prospectively collected data of all mothers with fetal defects.
- Outcome of all fetuses was collected from electronic medical records. Outcomes collected include Mid Trimester Termination of Pregnancy vs Live Births and cause of termination.
- Retrospective analysis made from details recorded in standardised collection form from case records of all live births. Antenatal, perinatal and surgical timing, methods and outcomes on follow up was collected.
- Outcomes was analysed using SPSS statistics using student T-test for continuous variables and Fischer Exact test and CHI2 test for categorical variables.
- Statistical significance declared at p<.05 with 95% CI and OR.

Results

**Antenatal Demographics**

- Gestational age at booking = 12.70±10.09 weeks
- Gestational age at diagnosis = 19.00±11.07 weeks
- Associated anomalies in survivors = 4/25 (16%)
  - Fallot's tetralogy
  - Dandy Walker
  - Anencephaly
  - Bladder Exstrophy
  - Polysplenia
- Antenatal karyotype in survivors = 12/25 (52%)
  - All karyotypes in survivors = 18/25 (72%)

**Neonatal Outcomes**

- Overall Survival = 21/25 (84%)
- NEC in survivors = 3/25 (12%)

**Surgical Outcomes**

- Midtrimester termination rate was high in isolated omphalocele group (55%).
- Maternal age was significantly lower in those with gastrochisis.
- Most babies were delivered by caesarean section in both omphalocele and gastrochisis groups.
- Most babies with isolated omphalocele or gastrochisis had favourable outcome.
- Primary closure was done in 64% of babies with anterior abdominal wall defects.
- Resource utilization (time to full feeds and duration of hospitalization) was not different between two groups.
- Long term follow up is needed especially in the defaulters for assessment of neurodevelopmental outcomes.

**Recommendations**

- Valid data obtained from the local institution is helpful for antenatal counselling of parents.
- Long term follow up in Specialist Clinics is suggested to look at neurodevelopmental outcomes in this group of high risk neonates.