P20.09 Tetralogy of Fallot and malalignment ventricular septal defect detected at early echocardiography

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Objective
The aim of this study was to better understand the natural history of Tetralogy of Fallot (TOF) and of malalignment ventricular septal (VSD) with aortic override detected in fetal life.

Methods
All cases of TOF or isolated (without pulmonary stenosis) malalignment VSD diagnosed at early echocardiography (< 16 weeks) were successively evaluated at around 21 and 34 week's gestation respectively.

Final diagnosis was determined at birth or at post mortem examination.

Results
In the period 2013 – 2018, 36 fetuses with TOF or with malalignment VSD were detected at early echocardiography. In 14 cases parents opted for termination of pregnancy (TOP) in the 1st trimester, due to other structural or chromosomal abnormalities and were excluded from the study. In further 2 cases parents opted for TOP at mid-trimester scan.

In 6 of the remaining 20 fetuses (14 cases of TOF and 6 malalignment VSD) the CHD progressed in severity in the 2nd (2 cases) and 3rd trimester (4 cases).

In 4 of these cases a malalignment VSD progressed in TOF and 2 cases of TOF progressed in TOF with pulmonary atresia (PA).

Conclusion
TOF or malalignment VSD may be diagnosed at early echocardiography. In 40% of cases, associated anomalies were detected in the 1st trimester.

Progression from a malalignment VSD to TOF and from TOF to TOF with PA throughout pregnancy was documented. It seems to be less frequent between early and 2nd trimester echocardiography than between 2nd and 3rd trimester echocardiography.

However more case series are needed to identify the correct incidence of this phenomenon because this information is critical for appropriate counselling of the couple.