OP12.04 Umbilical vein blood flow in monochorionic twin pregnancies affected by selective fetal growth restriction
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Introduction
Selective fetal growth restriction (sFGR) is one of the possible complications of monochorionic twin (MC) pregnancies. The aim of this study is to analyze the differences in the umbilical vein (UV) parameters during pregnancy in MC twins affected by sFGR and healthy controls.

Method
We have prospectively collected data from MC diamniotic pregnancies from Jan 2017 to Mar 2019. Serial ultrasound measurements were taken every 14 days from registration till delivery, miscarriage or fetal intervention (cord occlusion or LASER). The diameter (d) of intraabdominal part of the UV and the maximum velocity of the blood stream (Vmax) was measured. Other common parameters were also recorded. Blood flow (BF) was calculated as BF = \( \pi d^2 V_{\text{max}} / 8 \).

Statistics
We included 216 pregnancies. SFGR was diagnosed in 64 cases. The goal of our analysis was to find out whether the difference in UV parameters between the large and the small fetus varies systematically with the sFGR diagnosis. As a first step, we visually inspect how the UV parameters vary over time in the four groups separately (small/large fetuses, sFGR positive/negative).

Results
The coloured curves show the trend of the UV parameters in each group. (Figure – 2). To this end, we construct percentile graphs of all UV parameters across all fetuses in our dataset over time and against these percentiles, we plot a time series with an average value of these UV parameters in each of the four groups.

Conclusion
Umbilical vein parameters seem useful in evaluating MC twin pregnancies affected by sFGR. The EFW normalization of UV parameters seems to be necessary in analysing of the data. The difference in Vmax and BF shows a stronger correlation with sFGR than the difference in the diameter of the UV. Further analysis of the reached data will be done.