



Color difference on the maternal side of the placenta in distinguishing between TTTS and TAPS

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Objective

To investigate if the color difference between two placental shares in monochorionic placentas can help distinguishing between twin–twin transfusion syndrome (TTTS) and twin anemia–polycythemia sequence (TAPS).

Methods

We evaluated all digital pictures of TAPS, acute peripartum TTTS and a control group of uncomplicated monochorionic placentas examined in our center. We determined the color intensity of the individual placental share using an image–processing program and we calculated the color difference ratio (CDR).

Results

Digital pictures of 5 acute peripartum TTTS, 25 TAPS and 54 control group placentas were included in this study. The median CDR in acute peripartum TTTS was significantly lower compared to TAPS placentas, 1.20 (inter-quartile range (IQR) 1.05–1.20) and 2.50 (IQR 1.85–3.34), respectively ($p < 0.01$), and was comparable to the control group (CDR 1.11, IQR 1.05–1.22).

Conclusion

TAPS placentas have a higher CDR compared to acute peripartum TTTS placentas. Examining color difference on the maternal side of the placenta might help distinguish between acute peripartum TTTS and TAPS.