

Isolated Fetal Anemia from Fetomaternal Hemorrhage (FMH) in a Dichorionic Twin: A Case Report. EP12.66

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Background

- FMH: passage of fetal blood into the maternal circulation, without traumatic or iatrogenic causes.
- Clinically significant when massive ($\geq 20\%$ of fetal blood volume) or when it causes moderate-to-severe fetal anaemia (MCA-PSV ≥ 1.5 MoM).
- Typically described in singletons; in twins, fetal anaemia is usually attributed to TAPS in monochorionic twin pregnancy.

Case presentation

- 31-year-old primigravida, dichorionic diamniotic twin pregnancy, otherwise uncomplicated.
- At 29+2 weeks: admitted for intravenous iron therapy for maternal anaemia.
- Cardiotocography: non-reassuring pattern in Twin 1, reassuring in Twin 2.
- Ultrasound Twin 1: cardiomegaly, abnormal Doppler findings, MCA-PSV 1.99 MoM.
- Twin 2: normal Doppler – suspected severe fetal anaemia of unknown origin or TAPS.

Management and outcome

- After multidisciplinary counselling, emergency caesarean section at 29+2 weeks.
- Twin 1: haemoglobin 2.1 g/dL, requiring transfusion and intensive respiratory support.
- Twin 2: normal haemoglobin values and a more favourable course.

Diagnostic confirmation

- Maternal flow cytometry: fetal red blood cells in the maternal circulation, confirming massive FMH.
- Placental histopathology: no vascular anastomoses, excluding TAPS.

Conclusion

- FMH must be considered in isolated fetal anaemia in dichorionic twins.
- Discordant MCA-PSV with a normal co-twin should prompt flow cytometry.
- Doppler surveillance and timely delivery are decisive for outcome.

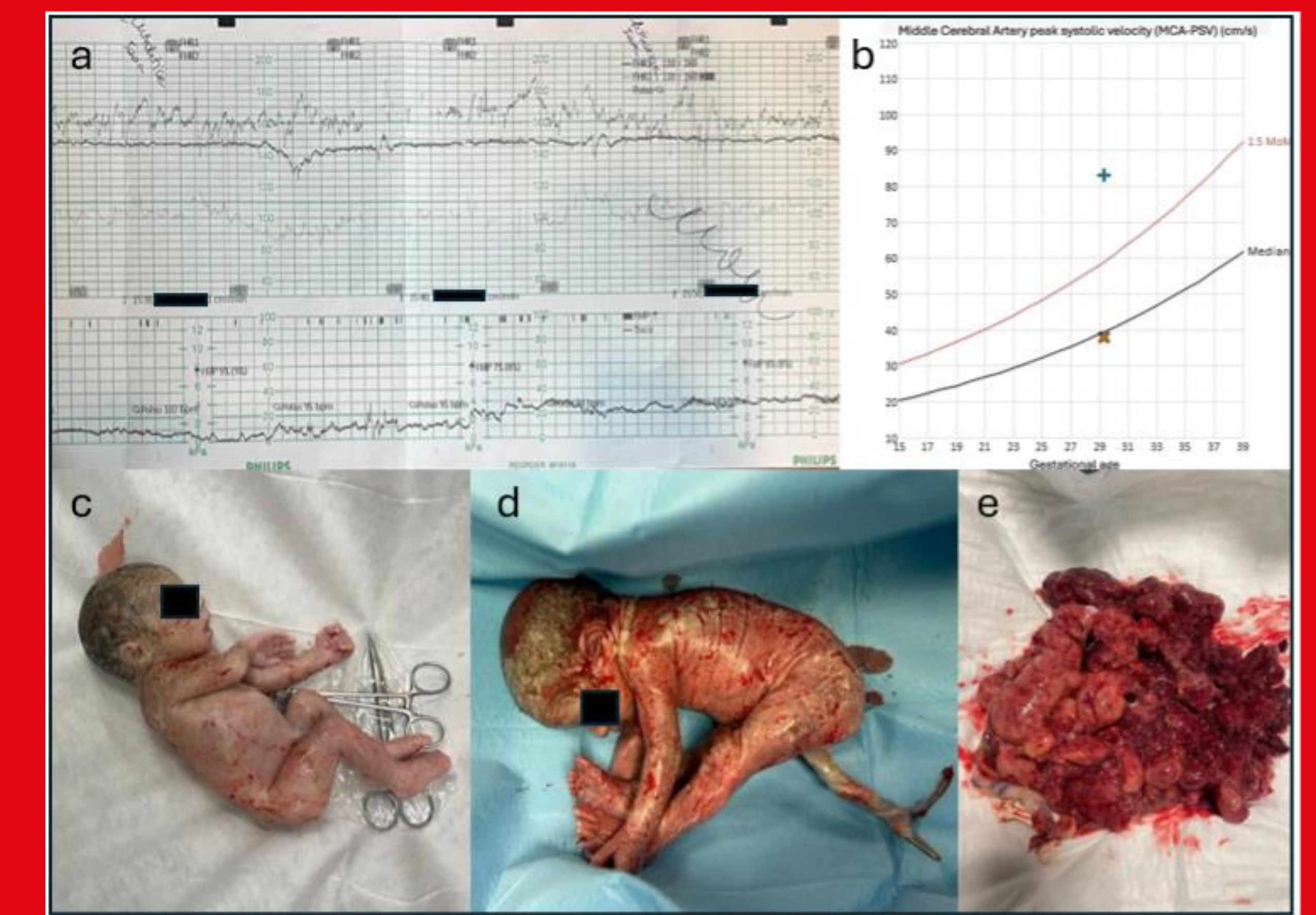


Figure 1.

(a) Cardiotocography on admission at 29+2 weeks showing Fetus 1 (above) with a baseline of 145 bpm, reduced variability, one acceleration, and one spontaneous deceleration; Fetus 2 (below) displays a normal baseline, normal variability, and present accelerations. (b) Middle cerebral artery peak systolic velocity (MCA-PSV) at 29+2 weeks demonstrating severe anemia in Fetus 1 (blue cross, 83.60 cm/s corresponding to 1.99 MoM) and normal values in Fetus 2 (orange cross, 38.73 cm/s corresponding to 0.99 MoM). (c) Twin 1 at birth demonstrating profound skin pallor consistent with severe anemia. (d) Twin 2 at birth

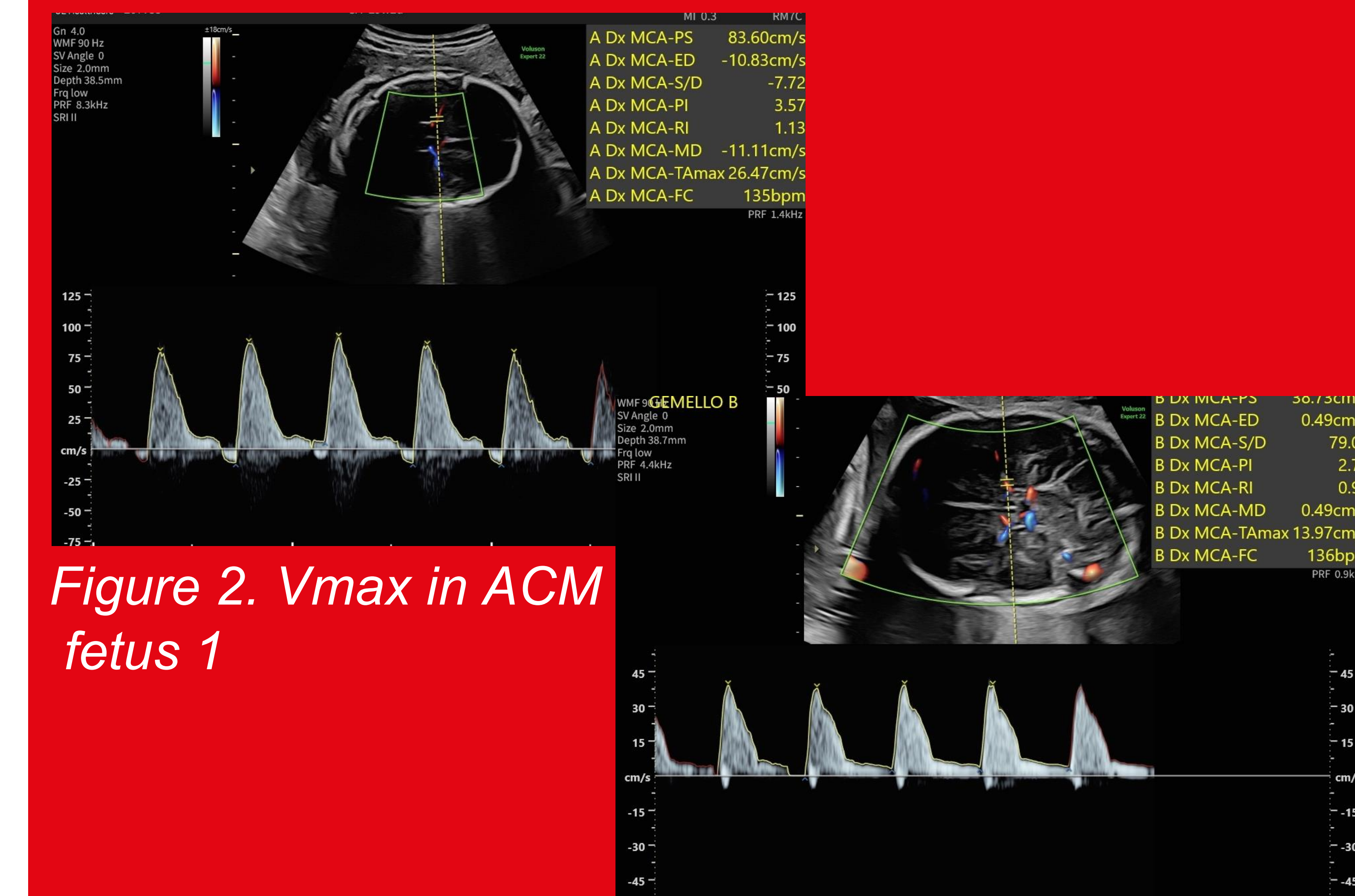


Figure 2. Vmax in ACM fetus 1

Figure 3. Vmax in ACM fetus 2