

## ODM+ Case Study – Postoperative Warming: 3-Week Old Baby

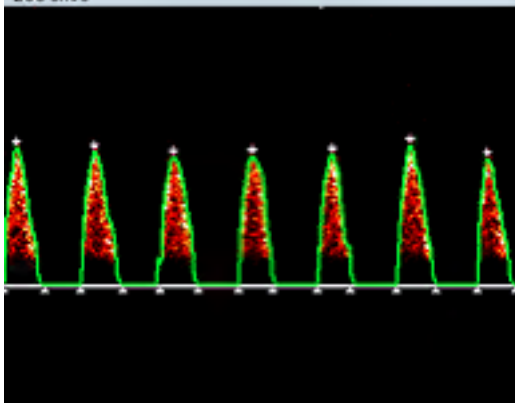
Weight 3.6 kg (8 lb), height 58 cm (23 in), body surface area (BSA) 0.22 m<sup>2</sup>. Postoperative bowel resection.

**1.**  
The baby had fluid management in the operating theatre guided by the ODM+ and was now in intensive care for postoperative monitoring. **Flow Time corrected (FTc)** is reduced and there is a small respiratory swing on the waveform. **Heart Rate (HR)** may be acceptable.

CO 0.7 l/min	SV 4 ml	FTc 289 ms
PV 96.5 cm/s	CI 3.4	HR 173 bpm

Flow Monitoring Mode

200 cm/s

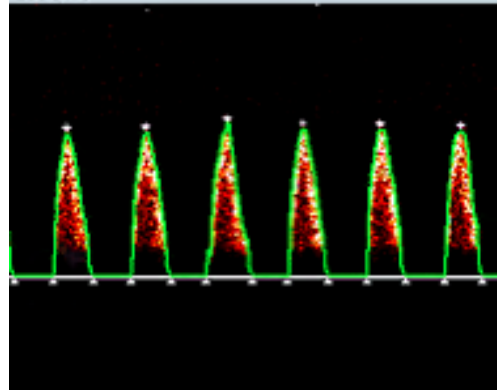


**2.**  
**FTc, Stroke Volume (SV), Peak Velocity (PV), Cardiac Output/Index (CO/I)** are increasing. The baby feels warmer to touch. This may indicate a reduction in afterload due to warming after surgery. However, since the respiratory swing continued, there may now be a slight relative hypovolaemia, so some fluid was given.

CO 0.9 l/min	SV 5 ml	FTc 305 ms
PV 110 cm/s	CI 4.0	HR 172 bpm

Flow Monitoring Mode

200 cm/s

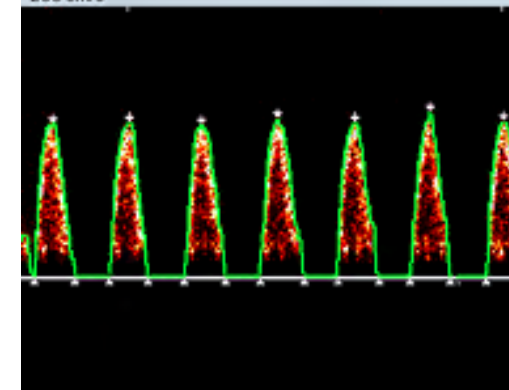


**3.**  
Following the fluid, **FTc, SV, PV, CO/I** are increasing. **HR** may be increasing for several reasons; e.g., further relative hypovolaemia as the baby continues to warm or pain/distress.

CO 1.0 l/min	SV 6 ml	FTc 331 ms
PV 118 cm/s	CI 4.6	HR 178 bpm

Flow Monitoring Mode

200 cm/s



### Summary

The ODM+ can be used safely to assess cardiac function and its responses to interventions. The ODM+ is precise enough to see small changes in central vascular flow. Flow is very responsive to even small changes in circulating blood volume as well as changes in arterial compliance.