

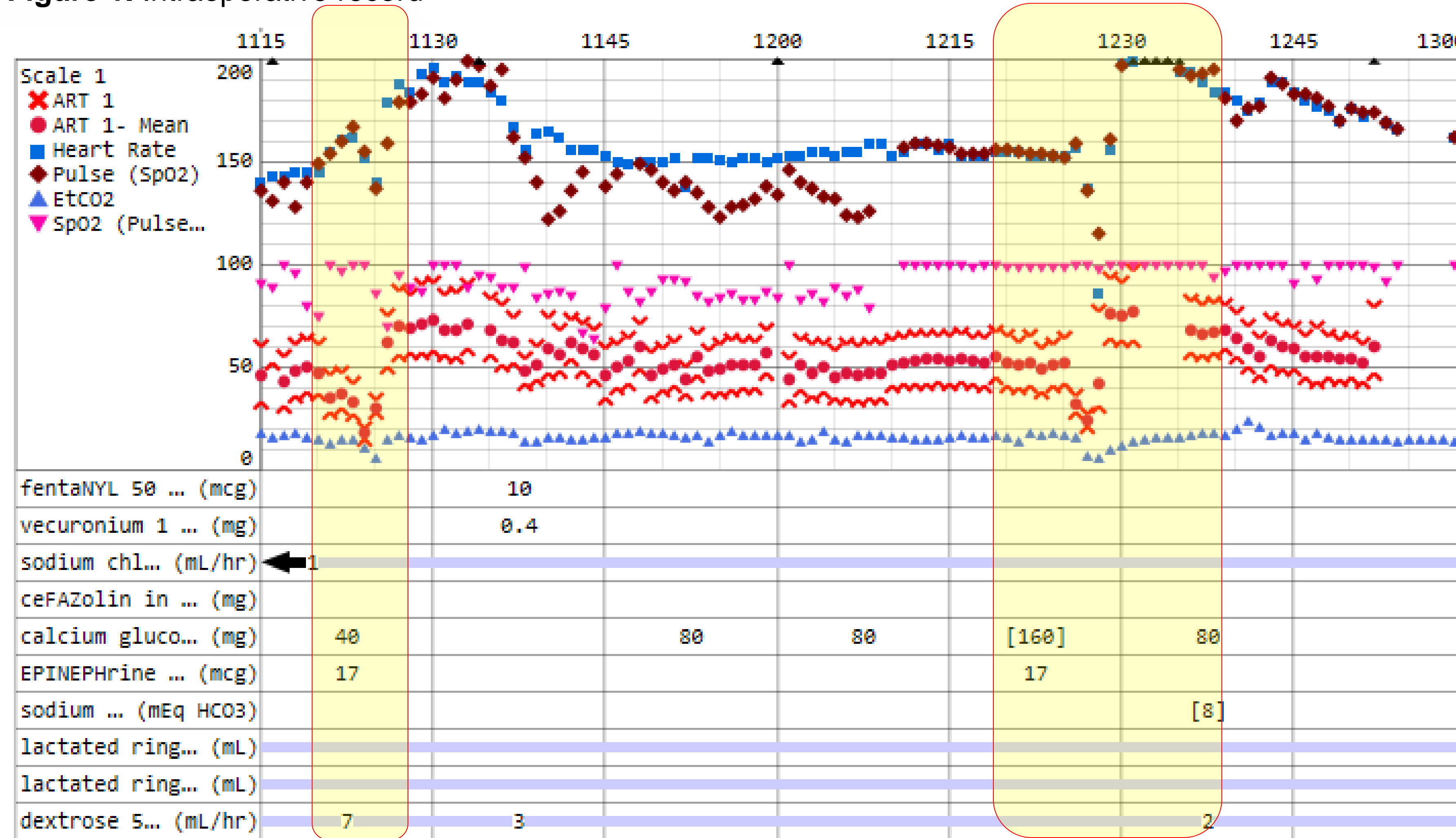
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Background

- 32-week gestational age male fetus, estimated fetal weight of 1.7 kg.
- Scheduled for immediate resection and/or debulking of a large cystic sacrococcygeal teratoma (SCT) after Cesarean section.
- The procedure's urgency was due to rapid SCT growth and risk of cardiac compromise—an increase in dilation of the inferior vena cava had been noted on fetal echocardiogram.
- The Cesarean delivery was uneventful, the child was intubated immediately after birth with placement of peripheral IVs, umbilical venous and arterial catheters.
- The patient was transferred immediately to the fetal OR where blood products and emergency medications had been prepared. The patient's hematocrit (Hct) was 31%.

Figure 1. Intraoperative record



Intraoperative Course

- Patient was placed in the prone position and the umbilical lines were checked for leakage.
- A slow transfusion of packed red blood cells (PRBCs) was started as surgery commenced.
- A tourniquet was applied to aid hemostasis, yet heavy blood loss ensued early in the case.
- The mean arterial pressure dropped to 20mmHg.
- Epinephrine 10mcg/kg, calcium gluconate 30mg/kg, and PRBCs, platelets, and fresh frozen plasma (FFP) were given followed by prompt resolution of the hypotension.
- At the time of closure, the patient was stable after receiving 200mL of PRBCs, 100mL of platelets, and 100mL of FFP.
- The patient's Hgb was only 8.5mg/dL, so additional PRBCs were given.
- The arterial waveform went flat and peaked T-waves were seen on the electrocardiogram.
- IV epinephrine was given and the ventilator rate was increased. Prone chest compressions were administered with prompt return of spontaneous circulation. The PRBCs were stopped. Calcium, insulin and bicarbonate were given, and the T-waves decreased in amplitude.
- An iStat showed the potassium level had risen to 6.1 mg/dL. The patient was stable and normotensive throughout the remainder of the closure, and prior to leaving the OR, the potassium level was 5.8 mg/dL and Hb was 10.7 mg/dL.
- The patient was transferred to the neonatal intensive care unit, where he recovered and was eventually discharged in good health.

Conclusion

- Anesthesiologists must always be prepared for transient hypotension and hypoxia, particularly when the surgeons lift the patient to expose the underside of the SCT.
- Blood products must be available and should be as either fresh or washed. Unit doses of epinephrine, bicarbonate, calcium with dextrose and insulin infusions should be immediately available for administration.
- Verifying the securement and patency of umbilical lines in the prone position and during position changes and transportation is crucial.

References

- Hedrick et al. J Pediatr Surg 2004;39:430-8
- Kremer et al. J Pediatr Surg 2016;51:1826-29