Permission to print: Yes
Category: Drug / Medication
Near Miss or Accident: Near Miss
Type of incident: Management
Knowledge Error: No
Rule Error: Yes
Skill Error: No
Violation: No

Description: During the priming of a neonatal circuit it became apparent there were issues with the cardioplegia occlusion. The occlusion was so tight [ 4:1 SR tubing in a single 85 pump] that the pump had trouble running but there was still free flow solution coming through the line. Perfusion assistance was requested to access the situation. The second person confirmed there was an undiagnosed problem with the occlusion and removed the tubing before placing it back into the roller pump raceway. At some point in checking the occlusion the clamp on the cardioplegia solution was removed and inadvertently run into the prime. The primary perfusionist was unaware of this occurrence and continued to prime for a case which included the addition of blood and standard prime drugs for a 3 kg patient. The case started moving very quickly and a colleague ran a prime sample gas. The sample result was handed back to the primary perfusionist with no comment, it was assumed that the sample was within normal parameters because of this. Due to time constraints the lines were handed up to the table, it was at this point it became apparent that the cardioplegia had emptied into the circuit (potassium of 18 and a glucose of 22). The surgeon who stopped dissecting to wait for the prime to be corrected. I was able to wash the prime with 400ml of NaCl and 15 min the sodium and glucose came back to normal.

Contributing factors: Having someone unfamiliar with the circuit looking over the pump for help.

Corrective action: The surgeon was informed and promptly stopped dissecting whilst the prime was corrected. The prime was washed with 400 ml normal saline to bring the potassium and glucose down to normal. The roller pump function and flow was subsequently checked in vitro for occlusion settings at 3:9 o'clock and 6 o'clock least occlusive positions on the affected pump and a brand new S5 roller pump at clinical flows and line pressures. Both pumps performed according to spec however the flow factors were found to be incorrect by a small marging and appropriately adjusted.

Preventative action plan: Over occluded pumps require the occlusion mechanism to be excessively loosened and the occlusion process repeated from obvoius under occlusion to just complete occlusion in the 9:3 position

Manufacturer advised: Yes
Discussed with team: Yes
Ext Authority Advised: No
Hospital incident filed: No
Patient outcome variance: Nil