

Drug / Medication - 2017

Permission to print:	Yes
Incident type	Near Miss
Type of incident:	Management
Catagory	Drug / Medication
Description:	<p>A Stockert SIII heart lung machine was set up and primed as per standard protocol. The priming solution in our unit for an average sized adult is 1.5L Plasmalyte, 250mL Albumex 4% and 15,000IU Heparin. During priming, the perfusionist for the case noticed that line pressures seemed slightly higher than normal for the given set-up and flow rate yet occlusions were fine. The perfusionist asked a colleague to look over the circuit and occlusion. It was concluded that nothing was out of ordinary in terms of the set-up and function of the pump. Whilst giving the set-up a final check-over, it was noticed that the "Plasmalyte" used to prime the circuit was in fact was 4% glucose 0.18% NaCl (1L bag).</p> <p>We use two checklists. The first is a short paper checklist on the patient's theatre chart, which doesn't include the checking of fluid expiry dates. The second checklist is a lengthier, laminated sheet to be completed upon wheeling the pump into theatre which does include checking fluid expiries. The mistake was picked up in the period between the first and second checks. If it was not noticed at this time, it should have been picked up in the second checklist. We haven't formally changed our checklist at this time.</p> <p>The bag for this solution was identical in colour and design, and had been inadvertently loaded into the storage container for Plasmalyte in the pump room. This had been overlooked by the perfusionist during priming. It was initially decided that the circuit containing glucose should be drained via the recirculation line into an effluent bucket then flushed with 1.5L normal saline, before re-priming with correct fluids. Once this was completed an i-STAT blood gas of the prime was run, showing that the glucose level of the prime remained to be 30mmol/L. Line pressures remained slightly higher than expected as fluid was recirculated. Given that the glucose levels in the prime were remained to be significantly higher than average and the patient was an insulin dependent diabetic, it was then decided to discard the circuit and set up a new one.</p>
Preventive actions	Diligent checking of all fluid labels, not just expiry dates.
GOOD CATCH - what went	Doing a 'final check' of the circuit not limited to a check-list of specifics: taking time to cast a general eye over all aspects of the circuit before transporting it into theatre.
Protocol issue	No
Rule issue	Yes
Skill issue	Yes
Team Issue	No
Violation	No
Manufacturer advised:	No
Discussed with team:	Yes
Hospital incident filed:	No
Ext Authority Advised	No

Procedure acuity:

Elective

Commentary

PIRS has had a similar report of an unintended substitution of a glucose solution during CPB. The potential for a severe hyperglycaemia in this case was averted however reliance on diligence as a preventive plan is fragile and moderation to the checklist would be a prudent learning from this near miss. PIRS Ed