Permission to print: Yes
Category: Gas Supply
Near Miss or Accident: Near Miss
Type of incident: Equipment
Knowledge Error: No
Rule Error: No
Skill Error: No
Violation: No

Description: After performing a full oxygenator (fx15-40) setup, including check list including prime gas, no obvious problems where noticed. When initiating bypass, using clear prime, the arterial blood was noted to be "dark", pO2 on inline cuvette was reading lower than usual @75mmHg (9.9kPa), fiO2 55%. The FiO2 increased to 100%, pO2 increased 150mmHg (19kPa). Bypass was continued, the pCO2 was noted to be increasing via the inline Terumo CDI cuvette, sweep 1.5 l/min, pCO2 45mmHg > 50mmHg, this was checked using a BGA. Sweep gas increased to compensate pCO2 was still rising - pCO2 55mmHg. A gas delivery problem was suspected, a leak somewhere in the system / vapouriser problem? After close inspection, the gas delivery line attached to the outlet of the anaesthetic vapouriser was found to be loose, and was just resting on the outlet coupling which was facing upwards.

Contributing factors: On inspection of the anaesthetic vapouriser, it was found to have been serviced since the heart lung machine was last used, with a new "service due date" written on the label.

Corrective action: The loose gas delivery line was pushed on firmly, and fastened using a tie band. The sweep gas and fiO2 returned to normal settings, Blood gas sample taken to confirm correct functioning.

Preventative action plan: Bio-meds instructed to place "equipment serviced" tape over the pump, with a copy of "Biomeds service" attached. Extra vigilance can then we given to hardware or areas of the heart/lung machine affected. The tubing that is fixed to the vapouriser is a permanent attachment tie banded in place and as such is only physically inspected when cleaning after the case is finished. Checklist to be amended to include physical check of all gas connections.

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