

2020 Gas supply

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| Permission to print: | Yes |
| Incident type | Good Catch No Harm Incident |
| Type of incident: | Management |
| Category | Gas Supply |
| Description: | <p>On bypass with an adult MVR and the sole perfusionist in the hospital. All uneventful for the first 40 mins. The blood flow was 4 LPM and sweep gas 2.7. A sudden rise in the spectrum M4 CO2 was seen with resulting action of an increase in sweep gas by the perfusionist (to 3.6 then 5LPM). I [initially] put this down to CO2 being used in the operating field. This did not resolve the issue. The arterial filter started darkening at the same time. The gas line to the oxygenator was tested and no gas was discernible although the sweep was set at 5 l/min. (A quick check of the gas supply line and vaporiser seating did not find a visible issue. I made a clear urgent call for the circulating nurse to get the spare O2 cylinder from the adjacent perfusion room. The nurse brought in a CO2 cylinder. They then went to get the correct gas cylinder whilst another nurse was told to bring in the O2 cylinder from the patient bed outside the OR. Th gas line was connected to this cylinder and the SVO2 returned to normal. The anaesthetist came around to check the back of the HLM whilst gases resolved. He found that the inlet soft gas tubing was disconnected from the backbar from the vaporiser. This was reconnected and the gas was reinstated [from the gas blender]. The gas tubing distal to the vaporiser was all found not to be tie gunned or secured adequately. The gas line that had been become disconnected also was in contact with a suction container containing fluid from the HCU moisture vent that likely caused tension on the [unsecured] gas line. The data management record showed that the SvO2 had gone from mid 70's to 36.5 over 3 mins before returning to normal. The patient woke that night and progressed normally.</p> |
| GOOD CATCH - what went well | That the perfusionist was vigilant and noticed and reacted instantly |
| Preventive actions | The permanent gas lines were secured and tie gunned. The lines were cleared of other equipment. Also activated the sweep gas display on the M4 and set alarm limits that give an immediate alert to loss of gas flow distal to the blender and vaporise |
| What could we do better | That the circulating nurse had brought the correct gas cylinder and a very similar recent incident that was subsequently described during a discussion with colleagues been reported at the time it occurred (may have drawn attention to this weak link) |
| Manufacturer advised: | No |
| Discussed with team: | Yes |
| Ext Authority Advised | No |
| Hospital incident filed: | Yes |
| Knowledge issue | No |
| Rule issue | Yes |
| Skill issue | No |
| Team Issue | Yes |
| Commentary | <p>This not unfamiliar report again focuses the attention required to ensure secure gas supply during CPB. It also draws attention to the requirement for dedicated trained assistance for the perfusionist - most appropriately a second CCP. The other salient point is the missed opportunity of the timely reporting of a similar incident. Despite the benefits of reporting good catches, the reluctance to report remains a problem in perfusion and as the recent survey illustrated the primary reason remains a defensive culture. PIRS2 Ed</p> |