

Risk of drawing air during ECMO implementation

【Risk of drawing air during ECMO implementation】

A case was reported in which air was drawn in from the side branch installed in the venous line during ECMO implementation. Please reconfirm the safety measures.

【Case】

The three-way stopcock in the venous line was left opened at the initiation of ECMO, and since the luer cap of the three-way stopcock was a filtered cap, air was drawn into the circuit after strong negative pressure was applied to the venous line.

At the time of discovery, small bubbles were observed from the venous line to the centrifugal pump, and the upper part of the oxygenator. Fortunately, air was trapped by the oxygenator and was not in the arterial line. (Fig. 1)

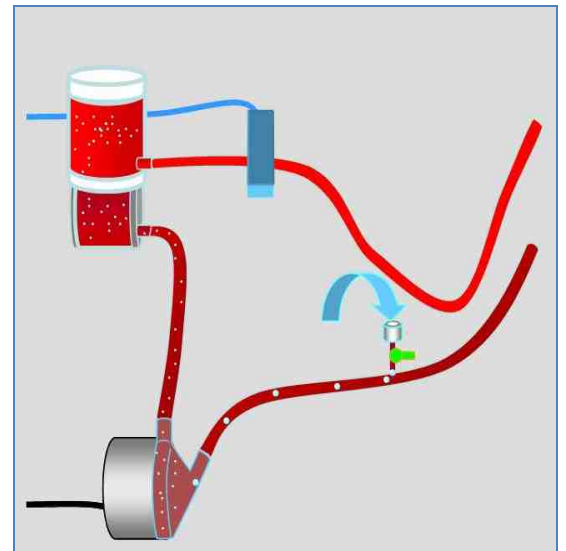


Fig. 1



Countermeasures

- 1) Filtered and perforated luer caps should always be replaced at the initiation of ECMO.
- 2) Three-way stopcock on the purge line and priming lines should always be closed at the initiation.
- 3) Include items such as checking the orientation of three-way stopcocks and replacing caps in the checklists and manuals. This will help in the safe management of ECMO.
- 4) Make other medical staff aware of the risk of drawing air.