Air embolism from haemodialysis catheter disconnection

Haemodialysis patient (38 year old male). A haemodialysis catheter became disconnected from the machine following reversal of the lines. The disconnection period was short and there was no evidence of machine failure. However, the patient suffered a cardiac arrest and died. Post mortem confirmed air embolism as the cause of death. Air embolism was due to ingress of air directly to patient circulation via the haemodialysis catheter and not via haemodialysis machine.

Investigation
1. No evidence of any equipment or staff training issues identified after detailed examination in the Coroner’s Court.
2. In future, where preservation of patient dignity allows, always have point of connection between catheter and dialysis lines visible (not under clothing).
3. A new brand of haemodialysis catheter connector (Tego) is available and this may prevent air ingress in the event of unanticipated disconnection. It is also purported to reduce catheter related sepsis rate. No evidence from Randomised Controlled Trials to support either possible advantage. Considerable cost implications which may limit application.

Please submit comments, solutions, and personal experience of similar incidents to:

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