



Response of the Renal Association (RA), British Renal Society (BRS) and Intensive care Society (ICS) to a reported death from blood loss following removal of a temporary femoral dialysis catheter.

Further to our safety alert and interim advice circulated from the RA-BRS Patient Safety Committee (<https://renal.org/severe-blood-loss-haemodialysis-patients-dialysis-line-disconnection-femoral-catheter-removal/>) in July 2018 informing you of the death of a patient due to haemorrhage following temporary dialysis line removal, the Coroner's Office has issued a Regulation 28 letter. The elderly patient was being treated for acute kidney injury due to rhabdomyolysis and pneumonia on a background of significant comorbidity. The renal community, including the Renal Association, British Renal Society and Intensive Care Society hereby set out our advice and subsequent action plan and our response to the Coroner to reduce the risk of similar severe and fatal incidents.

The National Reporting and Learning System of NHS Improvement has provided an analysis of reports of harm from late bleeding following femoral line removal in the last 3 years. Six incidents were reported. Of these, 3 resulted in patient deaths (including the incident reported above) and 2 others resulted in the major blood loss of over 1 litre of blood.

In lieu of National Guidelines which are being jointly developed by the RA, BRS and ICS, and in the absence of a significant evidence base, the Patient Safety Committee recommends that all renal units review their current practice. We recommend the following precautions and patient monitoring when the removal of a femoral dialysis catheter is planned:

- Appropriate timing of procedure. This is a semi-elective procedure: as such the responsible clinical team should ensure adequate staffing levels and appropriate competency exist to monitor the removal site and patient during and after the procedure and ensure patient comfort. The patient's ability to comply with instruction should be considered in relation to post-procedural monitoring.
- Possibility of coagulopathy: basic coagulation studies and platelet count should be available in advance of catheter removal. Absence of high-level anticoagulation should be confirmed.
- Need to apply pressure for defined period of time, we suggest for no less than 15 minutes. Ensure complete cessation of bleeding prior to removing pressure completely and applying dressing.
- Appropriate dressing.
- Duration of bedrest; positioning in bed; subsequent level of activity. Practice varies. We suggest bedrest of at least 1 hour after the procedure.
- Level of supervision post-procedure including timing and frequency of observations. This was highlighted as a key issue by the Coroner in the most recent case.
- Appropriate patient observation post-procedure. This is particularly important for isolated and confused patients.

- Procedure should only be carried out by an appropriately trained and competent health care professional.
- Patient education and information in relation to procedure and subsequent risks should be provided verbally
- In the case of significant bleeding, Trust's local major haemorrhage procedure should be activated
- Actions should be documented comprehensively and clearly in the clinical record, including timing of femoral catheter removal, coagulation results and length of local pressure and dressing and required observations in the notes.
- Recent removal of line should be taken into account in determining timing of safe discharge from hospital

A national guideline group is being formed to produce a practical guideline for this area for clinical services, working jointly with BRS and ICS. This will be available in spring 2019.

This alert is to make all units aware of the danger and provide interim advice until this full guideline is produced, consulted upon and accepted. This interim advice will then be circulated across the renal community and this and the final guideline will be available on the RA, BRS and ICS websites for reference.

We would be grateful to receive copies of any local Trust guidelines for femoral dialysis catheter removal at this stage. Please send to patientsafety@renal.org

Please continue to report incidents related to temporary dialysis catheter removal, however minor, through your local reporting system and inform the RA-BRS Patient Safety Committee.

The Patient Safety Committee can be contacted on patientsafety@renal.org