Dislodged venous fistula needle during haemodialysis leading to significant blood loss

Incident example
A patient was restless on dialysis as a result of the venous alarms being dislodged. The patient had lost a significant amount of blood, brain damage and, following discussion with the patient's relatives, treatment was withdrawn a short time later.

All technical, medical and nursing staff who are involved in the process haemodialysis or haemofiltration treatment must be made aware of the following recommendations:

MACHINE MAINTENANCE
- Haemodialysis and haemofiltration machines must be maintained regularly and records of this maintenance to be retained. This maintenance will include the venous alarm sensors.
- To ensure that default settings are always set to -10mmHg for arterial pressure alarms and +10mmHg for venous pressure alarms.
- Machines must be maintained in line with the manufacturers' recommendations.

TRAINING
- Training for patients and carers for home haemodialysis must take account of this alert and give them strategies to minimise the risks of this occurring.
- All staff and patients undergoing training for haemodialysis must be made aware of the risk of needle dislodgement.
- All training should be provided to include the manufacturers' recommendations and manuals.

NURSING CARE
a) Securing needles and lines
- All efforts must be made to ensure that HD line connections and needles are secure on commencement of dialysis treatment.
- Where possible venous needles should not be covered by clothing or blankets to enable easier observation.
- An assessment of patients' fistula, skin, allergies and any other particular needs should occur prior to needling and taping. The needles should then be taped down with the method deemed most appropriate, ensuring that the wings of the needles are taped securely down and a cross over tape is applied.
- grafts should be secured with tegaderm (as per guideline) and have a further cross over tape.
- The method of taping forms part of the existing access assessment and care plan.
- Home haemodialysis patients are trained to secure their needles in the same manner as noted above.
- Particular attention should be given to patients with hairy arms, clammy skin, etc where the tape may easily become detached from the skin. Also warm weather may have impact on the adhesive qualities of the tape and the moisture on the skin, so additional care is required to ensure the needles are secure.
- Needles and lines should not be taped to chairs or pillows as this presents a higher risk of dislodgement.
- Care must be taken to check security of the lines and needles after reclining a patient in a dialysis chair or after a change of position in bed.
- Looping of lines is helpful to reduce risk of tugging on needle.

b) Operating machines
- The venous alarm window width should be reduced where possible to a point that avoids "nuisance" alarms occurring, according to the patients' usual venous pressure. (Please also refer to the Guideline for the use of...
Transonic Flow QC machine in haemodialysis patients, in the Renal Services & Urology section of the Document Management System via the intranet.

- If at any time any faults are suspected with any part of a haemodialysis machine it should be removed from use immediately, labelled as out of order and the renal technicians (or relevant contracted maintenance agency) should be notified to carry out repairs. This is in line with UHL Policy.

c) Monitoring & related documentation
- Visual checks of the patient, connections and tape should be made at the commencement of and during dialysis.
- Patients in isolation rooms should be monitored regularly
- Patients at higher risk of needle dislodgement or those who are unable to inform nurses of any problems should be, where possible, nursed in easily observable locations and monitored on a frequent basis
- Nurse should always respond promptly to sounding machines alarms and/or patient call bell systems
- Alarms on machines MUST NOT be switched off or have their volume reduced
- Use of blood pressure monitoring and oximeter devices should be considered to alert staff to potential blood loss incidents in isolation rooms or where high risk patients are identified.

d) Other
- Care planning documentation must reflect the specific needs of the patient. The care plan must also reflect the patient's risk in terms of potential risk of needle dislodgement and any specific actions required to reduce the risk as appropriate. A referral may be necessary to occupational therapy for a splint fitting as required.
- Nurses should ensure that nurse call bells are in working order and in easy reach of the patient before leaving the patient after commencing dialysis

Our pledge
The National Patient Safety Agency is committed to quickly providing information and recommendations for actionable learning to the most serious incidents and concerns raised by health care staff. We will work to ensure our response is timely. Information is valued by front line staff and can be used as a driver to support real actions that will reduce the occurrence of harm and unnecessary risk to patients.

Distribution
This bulletin should be distributed to:

*The NPSA will be establishing a new Rapid Reporting, Response & Learning framework that will require NHS Organisations and health care staff to tell us about the most serious patient safety incidents and concerns within 36 hours. We are currently piloting reporting methods, testing how we can respond and looking at new and faster ways to produce information for frontline clinical, medical and nursing staff that will be valued by them. This Bulletin is one method of feedback we are trialling during the pilot. If you would like to comment on this Bulletin or make any suggestions please contact us, we want to hear from you.

Our thanks to the University Hospitals of Leicester NHS Trust for sharing this guidance

For further information or to talk to us about any serious incident or concern please contact:
The Pilot Response Team  |  Tel 020 7927 9890  |  Email chiefexec@npsa.nhs.uk