PROCEDURE FOR DEALING WITH A BLOOD LEAK ALARM

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Implementation date:	**September 2008**
Last updated:	**August 2013**
Last review date:	**August 2017**
Planned review date:	**August 2020**
Department:	**Renal Services**
Directorate:	**Medicine**
Hospital Site:	**SaTH**
Keywords:	**Blood leak alarm**
Comments:	

1.0 INTRODUCTION

Occasionally an artificial kidney will be faulty or damaged. If the fibres are damaged, a leak may occur at the blood/dialysate interface. This creates a risk of contamination of the blood by dialysate. This risk is increased with the degree of damage to the membrane. Three possible scenarios exist…

- A major blood leak.
- A minor blood leak.
- Spurious blood leak alarm.

2.0 AIM / PURPOSE

Early detection of blood leak and prevention of contamination of patients blood.

3.0 OBJECTIVES

For all SATH renal staff to follow correct procedure for “blood leak alarm”.

4.0 DEFINITIONS USED

Major blood leak - where there is a significant leakage of blood, enough to be visible in the dialysate.
Minor blood leak - where the machine detects blood but none is visible, the damage may only be slight
Spurious blood leak - the ‘blood leak’ has been caused by a dirty sensor or by air bubbles in the dialysate.

5.0 SPECIFIC DETAIL

- ***Ensure any dialyser that is dropped is disposed of because of risk of damage to fibres.***
- ***Ensure dialyser / circuit is primed to correctly to reduce risk of spurious blood leak alarms.***

How to test for a blood leak

- Blood leak alarm will sound, pumps will stop automatically and all clamps will be activated.

- Observe dialysate tubing (red connector). If tubing appears discoloured (pink or red), this is a **major blood leak** – No need to test.

- If the blood leak alarm has sounded, and no discoloration of the dialysate has occurred, test the dialysate from the red dialysate connecter for blood using a Labstix®. If positive for blood, **do not wash back.**

Confirmed blood leak alarm on dialysis.

Do not wash back.

- Clamp both bloodlines close to the needles/line. Clamp needles/line, disconnect lines, flush needles/line as soon as possible and discard all lines and dialyzer.

- If minimum of 2 hours dialysis has been carried out, perform a venous blood gas and if K+ < 5.0 mmls and patient not fluid overloaded, do not recommence dialysis.

- If less than 2 hours dialysis has been carried out, potassium level 5.0 or above or patient fluid overloaded, put machine into rinse mode and reline the machine for patient to recommence dialysis .

- Check Hb on VBG at time. If the patient has low Hb, check serum Hb next session (checking at the time of incident does not give accurate Hb). If less than 100 discuss action with Dr.

- Flush the needles/line to prevent clotting until you are ready to recommence dialysis.

- Complete audit form for lost circuit.

Spurious Blood Leak alarm. (Blood leak alarm no blood present on testing)

If you can see air bubbles in the dialysate tubing, these are probably activating the blood leak alarm. Turn dialyzer upside down (blue end up), to allow air to clear from dialysate side, check both dialysate connectors are secure and clipped into place.
Observe for visible air bubbles in dialyzer. Move dialyzer to allow these to clear.

This is a common alarm on priming or just after connecting patient if dialyser not primed correctly.

If patient connected, turn dialyser red side up whilst testing the dialysate for blood using a Labstix®.

6.0 AUDIT

Audit forms to be filled in event of lost circuit due to blood leak alarms.
All SATH renal staff to be taught correct procedure for dealing with blood leak alarms in renal staff training pack.
Keep dialyser and cap off all ports, record batch number and inform manufacturing company. A courier will be sent from company to collect dialyser.

7.0 REFERENCES

8.0