Heparin-free Haemodialysis using 0.9%Sodium Chloride continuous saline infusion

Cross Reference s	Machine set up and prime (2012) Connecting to the Haemodialysis machine (2014) Assessment prior to Haemodialysis (2013) Chronic Haemodialysis Patient commencement (2013) Acute Haemodialysis Protocol and Procedure (2013)
1. Purpose	**To conduct heparin-free haemodialysis via a fistula, graft or vascath in a safe and competent manner.**
2. Who must comply with this procedure ?	Registered Nurses and Enrolled Nurses who have received appropriate training and education to perform the procedure
3. This procedure applies in the following setting:	This procedure is applicable to adult patients who require heparin-free haemodialysis at St. George Hospital haemodialysis unit.
4. Precaution :	1. Anticoagulant-free/Heparin-free haemodialysis may be indicated in patients with a high risk of bleeding, for instance, patients with acute bleeding, recent and planned surgery, acute heparin-induced thrombocytopenia syndrome, and systemic anticoagulation for other reasons. 2. The standard 0.9% Sodium Chloride for priming and wash back of the circuit is connected in addition to 0.9% Sodium Chloride for the continuous infusion. 3. If there are concerns regarding circuit clotting during treatment, perform a 200ml bolus flush of 0.9% normal saline to allow assessment of circuit. 4. Ensure the dialysis UF Goal is set to include the volume of infused fluid.

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1. Equipment:

IV 0.9% Sodium Chloride 1000mL
Agilia IV pump
Agilia tubing set
High flow 3-way stopcock

2. Process

1. Refer to Machine set up and prime protocol to set up haemodialysis machine. Check there is no air in the bloodlines and the level in venous chamber is appropriate.
2. Install the tubing set in the Agilia IV pump
   - Prime the Agilia tubing set with 1000 mL bag of 0.9% Sodium Chloride.
   - Open the pump door.
   - Ensure all LEDs and buzzers are activated and auto-test passed with a message display to install the tubing set.
   - Align the tubing set horizontally along the tube guides so that the green connector is positioned to the right (green) and the blue clamp is positioned in from of the clamp guide (blue).
   - Insert the green connector in the green slot.
   - Position the blue clamp in its blue slot and then push the clamp to locate the spherical hinge into place.
   - Ensure the tube is in the left tube guide, and then push the door lever to close the pump door.
3. Set volume to be infused as 200mls x haemodialysis time/hours in **VOLUME SELECTION.**
4. Press **OK** to confirm volume to be infused.
5. Enter Flow rate (200mls) per hour in the **FLOW RATE SELECTION.**
6. Press **OK** to confirm the flow rate.
7. Connect the High flow 3-way stopcock to the pre-pump arterial port on the circuit.
8. Connect the ‘infusion line’ to one aspect of the High flow 3-way stopcock.
9. Connect the ‘wash back’ infusion line to the remaining connection of the High flow 3-way stopcock.
10. Open the roller clamp on Agilla tubing set and ensure the ‘tap’ has the ‘off’ arrow facing the ‘wash back’ line (allowing the infusion line to be open).

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11. Open the clamp on the arterial line.
12. Press **START** on IV pump to start the IV 0.9% Sodium Chloride infusion at commencement of haemodialysis procedure.
13. Ensure extra infusion volume is added the UF volume at the commencement of treatment.
14. Monitor the venous pressure and the TMP during the haemodialysis procedure. An elevated venous pressure or TMP may indicate clotting of the circuit.
15. If there are concerns about circuit clotting, perform a 200ml bolus flush of 0.9% normal saline via the 'wash back' line, which can be attended without stopping the continuous infusion. Inspect the venous bubble trap and dialyser for evidence of clotting.
16. If elevated pressures do not improve after a bolus normal saline flush, commence wash back and cease treatment.
17. Replace the circuit lines and dialyser and recommence remaining treatment if clotting has occurred before the patient has completed the prescribed dialysis time. Treatment may be discontinued at the discretion of the nurse in charge or renal registrar.

3. Network file location/ reference, if applicable	http://stgrenal.med.unsw.edu.au/StGRenalWeb.nsf/page/Nursing+Protocols
4. External References / Further Reading	Acknowledgement: Dr Edward Zimbudzi- Department of Nephrology - Monash Medical Centre in Victoria Intermittent saline flushes or continuous saline infusion: what works better when heparin-free dialysis is recommended? http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3634321/

Revision and Approval History

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