St George Hospital Renal Department Guideline: INTERNAL ONLY

CARE OF THE PATIENT ADMITTED FOR THE CREATION OF AN AV FISTULA/GRAFT

BOTTOMLINE

Post Operative care to be managed by ward nurses in collaboration with Vascular Access CNC page 310

Pre operative

- Education must be provided prior to surgery. Please utilise brochure on AV fistula.
- Patient is to wash whole body with Triclosan antimicrobial wash daily for two days prior to surgery. The patient will receive the wash in preadmission.
- Mapping of the patients limbs should be attended to assist in successful outcome of the arteriovenous access (EBPG, 2007) Pre operative vessel assessment with an ultrasound to evaluate diameter of the vessel, can help predict the positive outcome for the fistula formation.
- All anticoagulant and antihypertensive medication should be reviewed by the medical officer pre operatively.
- The patient and the staff should be educated that NO Blood pressure, cannula, venipuncture or ID band should be performed or placed on identified access limb. An emphasis should be on the preservation of the vein that will be used for the fistula creation.
- A sign for access awareness should be placed above the patient's bed on admission.

Intraoperative

- 1gm Cephazolin is administered

Post operative

1. The patients arm is to be kept warm and elevated. The arm is to be extended on a pillow for 24 hours or until the swelling subsides (K/DOQI, 2006)
2. A warm blanket or a towel over the AVF/AVG should be provided to promote increased blood flow and help with the ease of any vessel spasm.
3. Monitoring of patency by a palpable thrill or an audible bruit should be performed hourly for 24 hours. If these are absent, remove the dressing and reassess for a thrill or bruit. If the thrill and bruit remains absent, inform the vascular access nurse and vascular registrar for an urgent review.

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4. Limb circulatory observations should be performed hourly for 24 hours to detect for signs of steal syndrome. Observe for any ipsilateral pallor, cyanosis, coldness, numbness or pain in the AVF/AVG limb and assess distal pulses (Ball 2005).

5. Patients BP, temperature, pulse and respiratory rate need to be monitored hourly then monitored for 4/24 unless more frequent recordings are indicated. Medical staff are to be notified if systolic BP is <100 mmhg. The patient may require IV fluid replacement – please assess their hydration status by medical staff.

6. Dressing to be removed after 48 hours. Wound should be left exposed if it is clean and dry. Pressure bandages should never be used on fistula limbs as this may cause venous hypertension, haematomas and may cause thrombosis of the AVF/AVG.

7. Sutures should be removed after 7-10 days, or as per vascular surgeons.

8. An appointment for review by the renal vascular access nurse should be made one week post op. A post op appointment with the vascular surgeon should be made according to the post op orders.

9. Patients should be educated on and encouraged to perform fistula exercises which can help enhance vessel maturation. Encourage the patient to squeeze a rubber ball forcefully 10 times every hour 48 hours post op. Note patients with AVG do not need to do fistula exercises.

10. Patient should be informed that they can shower post operatively.

11. The patient is to avoid any heavy lifting on the access limb for at least 6 weeks to prevent haematoma formation.

12. The patient is advised not to wear tight clothing or any jewellery on the access limb to prevent restricting blood flow to the access.

13. If haemodialysis is required <24hours post surgery, assess the access for bleeding. If bleeding is minimal use low dose heparin during dialysis. Observe access site for bleeding hourly. If a haematoma arises or bleeding increases stop heparin immediately and inform the vascular team. If access surgery >24 hours and bleeding is minimal and there are no signs of a haematoma formation routine heparin can be used. If bleeding is moderate or a saphenous vein was harvested <48 hours, perform a heparin free dialysis. Assess the patient's fluid status and leave 0.5-1kg above their IBW to prevent postoperative hypotension.

Reference

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Ball L. K. 2005 Improving Arteriovenous Fistula Cannulation Skills. Nephrology Nursing Journal Vol. 32, No.6.

Kooman, J., Basci, A., Pizzarelli, F., Canaud, B., Haage, P., Fouque, D., Konner, K., Martin-Malo, A., Pedrini, L., Tattersall, J., Tordoir, J., Vennegoor, M., Wanner, C., ter Wer, P. and Vanholder, R. 2007, EBPG guideline on Vascular Access *Nephrology Dialysis and Transplantation,* 22 (suppl 2), pp. 88-117.

NKFK/DOQI (2006):http://www.kidney.org/professionals/KDOQI/guidelines_upHD_PD/VA/va_rec2.htm