SFHRenRR6
Obtain immediate access for haemodialysis by inserting a central venous catheter

Overview

This standard is about obtaining immediate venous access for haemodialysis. This may be carried out either as a planned or an emergency procedure. In an emergency the patient is sometimes unable to participate in the decision to insert a central venous catheter. Recognition and respect needs to be given to any previously documented decision and agreement about accepting further treatment. The setting will usually be a hospital ward, a renal unit, a surgical theatre or a radiology department.

Users of this standard will need to ensure that practice reflects up to date information and policies.

SFHRenRR6

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Performance criteria

You must be able to:

- P1 discuss reasons for haemodialysis and the need for access to the blood-stream with the patient
- P2 explain to the patient that the catheter is a temporary vascular access and, where appropriate, that surgery for an arterio-venous fistula will be arranged
- P3 describe what the insertion of the central venous catheter entails
- P4 recognise and acknowledge the level of the patient's need for information, (e.g. the length of time for insertion) including information about risks and possible complications involved with the procedure (e.g. arterial puncture, pneumothorax, subsequent infection)
- P5 obtain fully informed, written consent before the insertion where possible (e.g. in a life threatening situation there may not be time to do this)
- P6 prepare the room so that it is clinically clean and safe and perform the procedure under strict antiseptic conditions
- P7 select an appropriate type and length of haemodialysis catheter, following the local protocol for catheter selection
- P8 select an appropriate site for cannulation (e.g. jugular, femoral or subclavian vein) taking into account the urgency of the situation, knowledge of previous central catheter insertions and the minimisation of risks (e.g. venous stenosis)
- P9 position the patient appropriately depending on the site of insertion (e.g. `head up feet down' position)
- P10 apply appropriate monitoring to ensure the patient remains comfortable during the procedure and does not develop hypoxia or arrhythmias (e.g. pulse oximeter)
- P11 ensure that an assistant is present
- P12 perform the procedure with direct ultrasound guidance
- P13 administer local anaesthetic to make the remainder of the procedure pain-free
- P14 minimise the risk of complications such as arterial puncture, air embolus, pneumothorax, infection
- P15 secure the inserted catheter in a safe and painless manner to minimise the risk of the catheter falling out
- P16 flush with saline and instil anticoagulant to minimise the risk of intracatheter thrombosis depending on the catheter type following the local protocol
- P17 interpret a radiograph after insertion of a jugular, femoral or subclavian catheter (e.g. to ensure catheter position correct, to ensure no immediate pneumothorax or to confirm satisfactory catheter tip position)
- P18 record the procedure

SFHRenRR6

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P19 deal with important complications that may develop during or immediately after the procedure (e.g. patient experiencing pain during procedure, arterial puncture, arrhythmia due to the guide wire irritating the right atrium or ventricle, pneumothorax, air embolus, catheter in the wrong position on radiograph)

P20 know when to abandon the procedure or where to obtain assistance if experiencing difficulty

SFHRenRR6

Obtain immediate access for haemodialysis by inserting a central venous catheter

Knowledge and understanding

You need to know and understand:

K1 how to take baseline observations of pulse, blood pressure and respiration rate
K2 skills of observation
K3 sterile procedures
K4 health and safety requirements in relation to practice and disposal of waste
K5 co-ordinating resources to facilitate the smooth running of the procedure
K6 the need for informed consent in sensitive and urgent situations and how to obtain
K7 evidence on patients' ability to make decisions in different states of health (e.g. depression)
K8 anatomy and physiology of the cardiovascular system relevant to cannulation of central veins
K9 assessment of the patient's condition
K10 how to administer local anaesthetic
K11 how to administer intravenous medicines
K12 the choice of vascular access (via jugular, femoral veins or subclavian veins)
K13 how to insert a central venous catheter (e.g. using aseptic technique, identifying landmarks to locate the vein, cannulating with a small needle, placing non-cuffed polyurethane or tunnelled silicone/carbothane catheters, priming catheters with heparin)
K14 suturing techniques
K15 how to detect and manage complications (e.g. patient experiencing pain during procedure, arterial puncture, arrhythmia due to the guide wire irritating the right atrium or ventricle, pneumothorax, air embolus, catheter in the wrong position on radiograph)
K16 national recommendations and other best practice guidelines (e.g. NICE)
K17 locally agreed procedures for inserting a central venous catheter
K18 2-D imaging ultrasound guidance for central venous catheter (CVC) insertion
K19 how to operate equipment (e.g. portable ultrasound devices) in collaboration with other practitioners (e.g. from radiology department or ITU)
K20 how to ask open-ended questions, listen carefully and summarise back
K21 methods of communicating sensitive information to individuals
K22 the importance of providing individuals with opportunities to ask questions and increase their understanding
K23 how to adapt communication styles in ways which are appropriate to different people (e.g. culture, language, or special needs)

SFHRenRR6

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K24 the importance of identifying how the individual wishes to be addressed and communicated with, and how to do so
K25 how to highlight the individual's abilities in a positive way
K26 the importance of treating individuals fairly, and how to do so
K27 the effects of culture, religious beliefs, age and disability on individual communication styles
K28 the different features services must have to meet people's gender, culture, language or other needs
K29 how information obtained from individuals should be recorded and stored
K30 the importance of obtaining full and accurate information about individuals, and how to do so

SFHRenRR6

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Additional Information

External links

This standard links with the following dimension within the NHS Knowledge and Skills Framework (October 2004):

Dimension: HWB7 Interventions and treatments

SFHRenRR6

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