Standard Operating Procedure

NIHR Sheffield Clinical Research Facility

Insertion and Management of a Peripheral Venous Cannula

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Standard Operating Procedure: NIHR Sheffield Clinical Research Facility
Insertion & Management of a Peripheral Venous Cannula

This SOP has been written to give general guidance to study personnel on how to insert a peripheral venous cannula. There are no GCP Guidelines concerning insertion of a peripheral venous cannula.

Background
Peripheral venous cannulation is required for participants requiring intravenous drugs/fluids to be administered or for emergency venous access. It is one of the most common invasive procedures carried out in the hospital setting. It is imperative that all staff involved in inserting peripheral venous cannulas adhere to the same procedure to reduce the risk of phlebitis and extravasations.

Definition
Peripheral cannulation is the insertion of a flexible tube containing a needle into a blood vessel, usually the peripheral blood vessels in the lower arms.

Procedure

1. The Investigator is responsible for inserting a peripheral venous cannula. This duty can be delegated to other appropriately qualified members of the research team as recorded on the Project Delegation Log.

2. The Investigator or delegated person will refer to the protocol to identify specific requirements for insertion of the peripheral venous cannula.

3. Prior to the procedure the investigator or delegated person must ensure the correct participant is identified and cross referenced with appropriate request forms. The areas to be checked are surname, forename, and date of birth, research study name and number and if appropriate, hospital registration number, current address and patient wrist label.

4. The Investigator or delegated person will explain the procedure to the participant.

5. The investigator or delegated person must perform the procedure in accordance with the trust relevant Health and Safety Policy.

6. The investigator or delegated person must ensure constant attention to an appropriate aseptic technique whilst procedure is being performed as identified in the Sheffield Infection Control Guidelines.

7. The investigator or delegated person should wash their hands according to STHFT Hand Hygiene Policy.

8. The investigator or delegated person will clean and prepare trolley/work area according to the Sheffield Infection Control Guidelines.
9. The investigator or delegated person will prepare all equipment required ensuring all study specific equipment is obtained. Equipment required:
   - Sharps bin
   - Cannula (sterile)
   - Sterile bung
   - Micropore® tape (check for known allergies)
   - Non-sterile gloves (check for latex allergy)
   - Mediswab®
   - Tourniquet
   - Dressing (sterile)
   - Cotton wool (sterile)
   - Trolley
   - Syringe (10mls)
   - Flushing agent (Sodium Chloride 0.9% for injection)

10. The investigator or delegated person must prepare the working environment to ensure comfort, light, room to manoeuvre, position and privacy of the participant.

11. The investigator or delegated person must wash their hands thoroughly according to STHFT Hand Hygiene Policy and check for any visible broken areas of skin and apply waterproof dressing if required.

12. The investigator or delegated person must apply non sterile gloves.

13. The investigator or delegated person will apply the tourniquet and select a vein. If the investigator or delegated person is in any doubt as to the appropriate vein to be used, advice must be sought from a colleague who has undertaken training in insertion of peripheral venous cannulation and has been deemed competent.

14. The investigator or delegated person must slightly relax the tourniquet.

15. The investigator or delegated person must prepare the participants skin at the selected insertion site with a mediswab, for at least 30 seconds and allow the area to dry.

16. The investigator or delegated person must not re palpate the vein or touch the skin.

17. The investigator or delegated person will re tighten the tourniquet.

18. The investigator or delegated person must remove the needle guard and inspect the cannula for any faults. If any faults are identified dispose of the cannula in an appropriate sharps container as identified in the STH Waste Strategy & Policy and obtain another.

19. The investigator or delegated person must hold the participant’s hand/wrist/forearm using the thumb, to keep the skin taut. Care must be taken not to contaminate the site.

20. The investigator or delegated person must place the needle about ¼ inch below the proposed site for cannulation, with the bevel facing up.
21. The investigator or delegated person must elevate the angle of the cannula to 15-25 degrees and insert the cannula into the skin (fragile veins require a lower angle of insertion).

22. Once the vein has been located with the needle the investigator or delegated person must level the angle for insertion.

23. The investigator or delegated person should note a back flow of blood into the cannula chamber, unless the vein is small.

24. The investigator or delegated person must ensure the line of the vein is followed, whilst withdrawing the needle slightly. If there is any sign of swelling, haematoma, pain or resistance the vein wall may be ruptured. The tourniquet must be released and the cannula and needle must be removed immediately and pressure applied with cotton wool.

25. When flash back is seen along the length of the cannula the investigator or delegated person will advance the cannula until it is fully inserted into the vein.

26. The investigator or delegated person will release the skin tension and relax the tourniquet.

27. The investigator or delegated person must apply digital pressure to the distal end of the cannula to prevent blood spillage.

28. The investigator or delegated person will remove the introducer needle and discard into an appropriate yellow sharps container in accordance with STHFT Waste Strategy & Policy.

29. The investigator or delegated person must secure a sterile bung to the end of the cannula.

30. The investigator or delegated person must secure the cannula to the participant using a sterile dressing.

31. The investigator or delegated person must flush the cannula with a minimum of 2mls of sodium chloride 0.9% for injection and capped off.

32. The investigator or delegated person must ensure the participants feels no discomfort, and observe the cannula site for signs of swelling or redness.

33. The investigator or delegated person must dispose of all equipment used safely in accordance with STHFT Waste Strategy & Policy.

34. The investigator or delegated person must keep accurate records regarding the cannula. Information must be recorded on Peripheral Cannula Chart:
   - The length, gauge of the cannula
   - Date and time of insertion
   - Location and Number of attempts
   - Identification of the site
   - Name and person placing the device
   - Type of dressing
   - Patients tolerance of the device
35. Sheffield Infection Control Guidelines indicate that cannula’s should be removed after 48 – 72 hours and if necessary reinserted into a new site.

36. The investigator or delegated person must visually inspect the cannula site prior to any use, observing for signs of swelling, redness, or tenderness. If any symptoms are noted the cannula must be removed and the symptoms documented in the medical notes and on any relevant source data documentation. Please refer SOP CRF.C126 Removal of a peripheral venous cannula.

37. For use of the cannula for Intra venous mediations the investigator or delegated person should refer to the trust administration of medicines policy and the study protocol.

38. When the cannula is no longer required or before the participant is discharged from the CRF the investigator or delegated person must remove the cannula. Please refer to SOP CRF.C126 Removal of a peripheral venous cannula.

Related SOPs

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<tr>
<th>Document Name</th>
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<tr>
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<td><a href="http://www.shef.ac.uk/faculty/medicine-dentistry-health/crf/sops">http://www.shef.ac.uk/faculty/medicine-dentistry-health/crf/sops</a></td>
<td>Alison Mortimer</td>
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Related Documentation

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<td>Dr H Parsons, Ms B Wade</td>
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1 Where a referenced document or related SOP is unavailable electronically a hard copy may be requested from the document's author or by contacting Sheffield Clinical Research Facility, O Floor, Royal Hallamshire Hospital, Glossop Road, Sheffield, S10 2JF, Tel: 0114 2713339.