Obtaining a blood sample from a peripheral venous cannula

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Standard Operating Procedure: NIHR Sheffield Clinical Research Facility

Obtaining a blood sample from a peripheral venous cannula

This SOP has been written to give general guidance to study personnel on how to obtain a blood sample from a peripheral venous cannula. There are no GCP Guidelines on how to obtain blood from a peripheral venous cannula.

Background

It is important that all staff working in the Clinical Research Facility use the same procedure when obtaining a blood sample from a peripheral venous cannula. This will ensure that there is continuity and consistency of the procedure.

Peripheral venous cannulation is required for participants requiring intravenous drugs/fluids to be administered or for emergency venous access. Venous access may also be required for serial sampling in a research situation. For the purpose of clinical research the cannula may be in situ for a few minutes or hours depending on the procedures as specified in the study protocol.

It is not STH policy to carry out this procedure therefore we have notified our risk lead and conducted an extended risk assessment – Appendix 1

Definition

Peripheral venous cannulation or insertion of a tube into a body duct or cavity is performed to provide access to the circulatory system. Multiple blood samples are obtained from a peripheral venous cannula to avoid repeated venepuncture to the research participant.

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 must perform the procedure of inserting a peripheral venous cannula in accordance with the trust relevant Health and Safety Policy.

3. The investigator or delegated person is responsible for ensuring that blood is obtained from a cannula according to study protocol. This duty can be delegated to other appropriately qualified members of the research team as recorded on the Project Delegation Log.

4. The investigator or delegated person must ensure the correct participant is identified and cross referenced with appropriate blood request forms. The areas to be checked are surname, forename, and date of birth, case report form, medical notes, research study name and number and if appropriate, hospital registration number and current address.

5. The investigator or delegated person must place a wrist band on the participant. This must include the participants name, date of birth, hospital number and the unit that the patient is attending. Wrist bands can be found in the 4 bed bay in the Clinical Research Facility.
6. The investigator or delegated person will ensure all study specific documentation is prepared and any local blood request forms are completed.

7. The investigator or delegated person must ensure that blood bottles are labelled correctly according to the study protocol or STH policy.

8. The investigator or delegated person will explain the procedure to the participant. Explaining what samples are being collected and why they are being collected.

9. The investigator or delegated person must keep accurate records in the patient notes or source data regarding the cannula. Information must be recorded on:
   a. The length, gauge of the cannula
   b. Date and time of insertion
   c. Location and number of attempts
   d. Identification of the site
   e. Name and person placing the device
   f. Type of dressing
   g. Patients tolerance of the device

10. The investigator or delegated person must wash their hands in accordance with STHFT Hand Hygiene Policy.

11. The investigator or delegated person will clean and prepare trolley/work area.

12. The investigator or delegated person will prepare all equipment required ensuring all study specific equipment is obtained.

13. Equipment required:
   a. Sharps bin
   b. Vacutainer Leur connector Blue
   c. Vacutainer bottles/study specific blood kits/Vacutainer Shield
   d. Mediswab
   e. Non-sterile gloves
   f. Trolley
   g. 10 ml plastipak syringes x 3
   h. 10 ml 0.9% Normal saline (check expiry date)
   i. BD Connecta (with 3 way tap)
   j. Blood transfer unit

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

15. The investigator or delegated person must wash their hands in accordance with STHFT Hand Hygiene Policy.

16. The investigator or delegated person must check the cannula site for swelling or redness. The cannula dressing should be examined to check that the appropriate dressing has been used. The Clinical Research Facility stocks IV3000 dressings for cannulas.
17. If the investigator or delegated person notes any redness, tenderness or swelling around the cannula site, the cannula should be removed and re-sited by an appropriately trained member of the research team as specified in the Project Delegation Log. The investigator or delegated person must document this in the source data. Including information on the time the cannula was removed and the alternative location where it was re-sited.

18. The investigator or delegated person must wash their hands in accordance with STHFT Hand Hygiene Policy.

19. The investigator must wear the appropriate protective clothing (disposable gloves, apron or uniform) when there is a risk of contamination. Gloves can be found in wall dispensers in the investigation suite, laboratory, dirty utility, bedrooms 1 & 2, 4 bed bay, treatment room and consulting rooms 1, 2 & 3 within the Clinical Research Facility. Aprons can be found in the investigation suite, laboratory, dirty utility, bedrooms 1 & 2, 4 bed bay, treatment room and phlebotomy room.

20. The investigator or delegated person must prime the BD connecta with saline, remove the white cap from the end of the cannula and attach the connecta. This is achieved by screwing the distal end of the BD connecta onto the end of the cannula.

21. The investigator or delegated person must clean the BD connecta with an alcohol wipe. This is carried out by wiping the connecta with the alcohol wipe in one direction and then discarding into the appropriate waste stream. The connecta should be allowed to dry for approximately one minute. Alcohol wipes can be found in all rooms in the clinical research facility.

22. The investigator or delegated person must draw up 1-2 mls of 0.9% normal saline using a sterile plastipak syringe. 0.9% normal saline are stored in the drug room.

23. The investigator or delegated person must flush the cannula using a sterile plastipak syringe with 1-2mls of 0.9% normal saline. This will prevent blood from clotting and to confirm patency on completion of blood collection.

24. The investigator or delegated person must withdraw 3 mls of blood from the cannula in a plastipak 10 ml syringe and discard as clinical waste. Discarding this sample will ensure accurate analysis of the results.

25. The investigator or delegated person must then attach an appropriate syringe to the 3 way tap, open the tap and draw the required amount of blood.

26. The investigator or delegated person must close the tap and remove the syringe.

27. The investigator or delegated person must draw up 10 mls of saline in a syringe, attach to the tap and flush the BD connecter and cannula with up to 10 mls of 0.9% normal saline.

28. The investigator or delegated person must attach the blood transfer unit and fill the appropriate blood bottles as specified in the study protocol. Order of draw instructions may be specified in the study protocol. If not STHFT order
of draw must be followed, instructions can be found in the phlebotomy room in the Clinical Research Facility.

29. The investigator or delegated person must ensure that all sharps are disposed of immediately into a sharps container in accordance with STHFT Waste Strategy & Policy.

30. The investigator or delegated person must wash their hands in accordance with STHFT Hand Hygiene Policy.

31. The investigator or delegated person must wash their hands in accordance with STHFT Hand Hygiene Policy.

32. The investigator or delegated person must gently invert the specimens to mix if they contain an additive or as dictated by the study protocol.

33. The investigator or delegated person must ensure all the samples are correctly labelled as specified in the study protocol or must adhere to STHFT policy.

34. If any blood spillage occurs the investigator or delegated person should clean up the spillage in accordance with STHFT policy.

35. The investigator or delegated person must wash their hands in accordance with STHFT Hand Hygiene Policy.

When obtaining further samples from the BD connecta for serial sampling at timed intervals please follow steps 21-35

36. The investigator or delegated person must remove the cannula when no longer indicated. The time and date that cannula was removed must be documented in source data. The state of the cannula site should be recorded in source data. If the cannula has to be in situ for longer it is recommended that it is removed between 48-72 hours.

37. The investigator or delegated person must dispose of the cannula in a yellow sharps bin. Sharps bins can be found in all clinical rooms in the Clinical Research Facility.

38. The investigator or delegated person must remove gloves and discard into appropriate clinical waste bag.

39. The investigator or delegated person must wash their hands in accordance with STHFT Hand Hygiene Policy.

40. The investigator or delegated person will ensure all procedures for the obtained samples outlined in the study protocol are followed.

41. The investigator or delegated person must ensure that if samples are to be shipped off site they are prepared, stored and couriered according to the study protocol.

42. The investigator or delegated person must ensure that if the samples are to be sent by courier to the laboratory the investigator or delegated person must
inform the receptionist at the Clinical Research Facility who will complete the courier log held on reception.

43. If the samples are for STH laboratories the investigator or delegated person must ensure prompt transportation to the appropriate laboratories.

44. If the samples are to be stored in the Clinical Research Facility the investigator or delegated person must inform a Clinical Research Facility nurse who will complete the appropriate storage log. Freezer storage logs are kept on reception in the Clinical Research Facility.

The investigator or delegated person must wash their hands in accordance with STHFT Hand Hygiene Policy.

Related SOPs

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