Venepuncture using Needle and Syringe
Standard Operating Procedure: NIHR Sheffield Clinical Research Facility
Venepuncture using Needle & Syringe

This SOP has been written to give general guidance to study personnel on performing venepuncture. There are no GCP Guidelines concerning venepuncture.

Background

It is important that all staff in the CRF perform venepuncture to Sheffield Teaching Hospitals NHS Foundation Trust standards to ensure participant and staff safety.

Definition

Venepuncture is the term used for the procedure of entering a vein with a needle. Venepuncture is carried out for 2 reasons:
1. To obtain a blood sample of diagnostic purpose.
2. Monitor levels of blood components.

Procedure

1. The investigator is responsible for performing venepuncture according to protocol. This duty can be delegated to other appropriately qualified members of the research team as recorded on the Project Delegation Log.
2. 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, date of birth, research study name and study subject number if appropriate, hospital registration number and current address.
3. The investigator or delegated person must perform the procedure in accordance with the trust relevant Health and Safety Policy.
4. 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.
5. The investigator or delegated person will refer to the protocol to ensure specific requirements for performing venepuncture are identified.
6. The investigator or delegated person must ensure that the patient has been prepared for any specific blood tests, e.g. fasting bloods.
7. The investigator or delegated person will explain the procedure to the participant.
8. The investigator or delegated person should ensure the participant has had no previous problems when having blood taken and if they have any known allergies to tape.
9. The investigator or delegated person should wash their hands according to STHFT Hand Hygiene Policy.
10. The investigator or delegated person will clean and prepare trolley/work area.
11. The investigator or delegated person will prepare all equipment required ensuring all study specific equipment is obtained.

   Equipment required:
   - Sharps bin
   - Syringe
   - Needle
   - Blood transfer unit
   - Vacutainer® bottles
   - Bottle stand
   - Mediswab®
   - Cotton wool swab
   - Micropore® tape (check for known allergies)
   - Non-sterile gloves (check for latex allergies)
   - Tourniquet
   - Trolley

12. The investigator or delegated person will ensure all study specific documentation is prepared and any local request forms are completed.

13. The investigator or delegated person must wash their hands according to STHFT Hand Hygiene Policy and check for broken skin and cover with waterproof dressing.

14. The investigator or delegated person will apply gloves.

15. The investigator or delegated person will loosely apply tourniquet. Position of the tourniquet may be varied depending on where the sample is to be obtained from.

16. The investigator or delegated person will ask the participant to rest their arm on an arm rest (if available) or place a pillow under their elbow.

17. The investigator or delegated person should place the appropriate sample bottles in a bottle holder to receive the blood.

18. The investigator or delegated person will tighten the tourniquet and assess the patients arm for suitable veins. If necessary, access the participants other arm until a suitable vein is identified.

19. The investigator or delegated person should not make more than 3 attempts to obtain a venous sample.

20. The investigator or delegated person must prepare participants skin with a mediswab for at least 30 seconds (allow the skin to dry). Do not repalpate the vein or touch the skin.

21. The investigator or delegated person must attach the appropriate size syringe to the appropriate sized needle and remove the white sheath.

22. The investigator or delegated person must insert the needle through the skin at an angle of approximately 15 degrees, following the line of the vein. Ensuring the skin is kept taut below the puncture site. The eye of the needle
must be completely in the vein to prevent haematoma formation and/or blood leakage.

23. The investigator or delegated person must ensure that blood is present at the base of the needle indicating the venepuncture is successful.

24. The investigator or delegated person must ensure the needle is kept steady and slowly withdraw the required volume of blood.

25. The investigator or delegated person must release the tourniquet.

26. The investigator or delegated person will place a cotton wool ball over the puncture site.

27. The investigator or delegated person must remove the needle applying sufficient pressure to prevent bleeding. If the participant is able the investigator or delegated person may ask the participant to maintain the pressure.

28. The investigator or delegated person must carefully remove the needle from the syringe and dispose of it into an appropriate yellow sharps bin.

29. The investigator or delegated person must attach a blood transfer unit to the syringe and insert it into the blood specimen tubes and allow appropriate amounts of blood to be drawn in.

30. The investigator or delegated person must not manually apply pressure on the syringe barrel as the vacuum will draw the blood into the tubes.

31. Once all the samples are taken the investigator or delegated person must dispose the blood transfer unit and syringe as a whole unit into an appropriate yellow sharps bin in accordance with STHFT Waste Strategy & Policy. The needle must not be re sheathed prior to disposal.

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

33. The investigator or delegated person must mix all the specimens well if the specimens contain an additive or as dictated by the protocol.

34. The investigator or delegated person must inspect the puncture site before applying the dressing. The cotton swab should be taped down firmly.

35. The investigator or delegated person must ensure the participant is comfortable.

36. The investigator or delegated person must ensure all the samples are correctly labelled.

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

38. If the samples are for STH labs the investigator or delegated person must ensure prompt transport to the appropriate laboratories.
39. The investigator or delegated person must remove gloves and discard into appropriate clinical waste bag.

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

41. The investigator or delegated person must record all samples obtained on the relevant source documentation for the study or in the participant’s medical notes.

Related Documentation

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<thead>
<tr>
<th>Document Name</th>
<th>File path</th>
<th>Author</th>
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</thead>
<tbody>
<tr>
<td>Project Delegation Log</td>
<td>Project Delegation Log</td>
<td>CRF</td>
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<tr>
<td>STH Hand Hygiene Policy</td>
<td><a href="http://www.sth.nhs.uk/STHcontDocs/STH_Pol/ClinicalGovernance/HandHygienePolicy.doc">http://www.sth.nhs.uk/STHcontDocs/STH_Pol/ClinicalGovernance/HandHygienePolicy.doc</a></td>
<td>STH Infection Control Team</td>
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<tr>
<td>STHFT Management of Health and Safety at Work Policy</td>
<td><a href="http://www.sth.nhs.uk/STHcontDocs/STH_Pol/HealthAndSafety/HealthAndSafetyatWorkPolicyStatement.doc">http://www.sth.nhs.uk/STHcontDocs/STH_Pol/HealthAndSafety/HealthAndSafetyatWorkPolicyStatement.doc</a></td>
<td>Mr N Riley; Mrs A Redfern</td>
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<td>STHFT Infection control guidelines</td>
<td><a href="http://www.sth.nhs.uk/STHcontDocs/STH_CGP/InfectionControl/SheffieldInfectionControlGuidelines.doc">http://www.sth.nhs.uk/STHcontDocs/STH_CGP/InfectionControl/SheffieldInfectionControlGuidelines.doc</a></td>
<td>STH Infection Control Team</td>
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<td>STHFT venepuncture open learning programme</td>
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<td>STH Foundation Trust</td>
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Where a referenced document 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.