NIHR | King's Clinical Research Facility

Performing Venepuncture in the King's Clinical Research Facility

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Authorised by	Professor Peter Goadsby, CRF Director
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April 2018	1. Change of author/reviewer due to staff changes 2. Section 5.7: additional information added on selecting a visible/palpable vein 3. Section 5.15: additional section on the procedure for unsuccessful attempts at venepuncture	E.Giemza
May 2020	1. Header updated to incorporate most recent NIHR logo. 2. Bullet points amended as per standard SOP format.	E. Giemza

Review History		
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April 2018	Review of v1.0 conducted by George Brown, CRF Research Nurse, as per the review date. Changes made as per 'Change History' and re-issued as v2.0	E. Giemza
May 2020	Review of v2.0 conducted by Caitlin Spooner, CRF Research Nurse, as per the review date. Changed made as per 'Change History' and reissued as v3.0	E. Giemza

1.0 Background

1.1 The King's Clinical Research Facility (CRF) supports many clinical trials and research studies that require blood samples to be collected for investigations and analysis, according to the study protocol.

1.2 Venepuncture is an invasive procedure performed to obtain blood samples from study participants in the CRF.

1.3 Poor aseptic technique and skin contamination when performing venepuncture can lead to infection.

2.0 Purpose

2.1 The purpose of this Standard Operating Procedure (SOP) is to describe the procedure for obtaining a blood sample from a peripheral vein without risking the safety of the study participant and to ensure a good quality and accurate sample.

3.0 Scope

3.1 The CRF encompasses the Clinical Trials Facility (CTF), the Experimental Medicine Facility (EMF) and the Cell Therapy Unit (CTU). CRF SOPs will apply to the CTF and EMF only and staff working in those areas should work to all relevant CRF SOPs. The CTU will continue to control and use its policies and SOPs to ensure compliance with Good Manufacturing Practice (GMP).

3.2 This SOP applies to all core clinical CRF staff and users of the CRF that need to perform venepuncture in order to obtain study blood samples.

4.0 Responsibilities

4.1 It is the responsibility of all staff performing venepuncture to have read and understood this SOP, undertaken

- Have read and understood this SOP
- Have undertaken an appropriate venepuncture course, a period of supervised practice (as required by their employing organisation) and to have been signed off as competent
- Undertake the procedure according to this SOP and the relevant study protocol

4.2 The CRF Manager or their delegate is responsible for overseeing that all core CRF clinical staffs are suitably trained and competent in performing the procedure.

4.3 The Principal Investigator (PI) for each study has the overall responsibility for ensuring that study staff are trained and are competent in performing the procedure.

5.0 Procedure

5.1 Explain the procedure to the participant and ensure that valid informed consent for the study has been given and verbal consent for the procedure has been obtained.

5.2 Check the participant's identity by checking their wristband against the patient notes or confirm their identity verbally.

5.3 Ask the participant for any allergies to adhesive dressings.

5.4 Assemble all the equipment required for venepuncture:

- Alcohol wipes (2% chlorhexidine in 70% alcohol)
- Gauze swabs
- Blood collection set
- Vacutainer holder
- Appropriate specimen tubes
- Non-sterile gloves and apron
- Tourniquet
- Adhesive plaster
- Sharps container
- Appropriate documents/forms
- Dressing towel

5.5 Check all the equipment and packaging to ensure that everything is in date and intact.

5.6 Wash hands as per the KCH Hand Hygiene Policy. Cover any visible broken skin

on the hands with a waterproof dressing as necessary.

5.7 Support the participant's arm on a pillow, apply the tourniquet, assess the limb and select the vein visually and through palpation. When selecting a vein, it is advisable to select the antecubital fossa (inner elbow), cephalic/basilic or median basilic veins. If a vein is not prominent, ask the participant to form a fist and ensure that a vein is visible and palpable before attempting venepuncture.

5.8 Release the tourniquet and select the gauge size of the needle appropriate for the size of the vein.

5.9 Wash hands as per the KCH Hand Hygiene Policy, open all the equipment carefully without risking contamination and place a dressing towel under the participant's arm.

5.10 Put on the gloves. Re-apply the tourniquet and clean the skin and the selected vein for at least 30 seconds with alcohol wipes using back and forth strokes and allow to air dry. Do not re-palpate the vein or touch the skin.

5.11 Remove the cover needle and inspect the device carefully for any faults.

5.12 Anchor the vein with the non-dominant hand by applying manual traction on the skin a few centimetres below the proposed site of insertion of the needle.

5.13 Hold the needle in the dominant hand in the bevel-up position and place directly over the vein; insert the needle through the skin (10°- 45°) according to the depth of the vein and wait for a flashback of blood in the chamber.

5.14 Reduce the angle of the descent of the needle as soon as flashback is seen or when puncture of the vein wall is felt, then slightly advance the needle into the vein, if possible.

5.15 A senior member of clinical staff should be called to assist with the procedure after two unsuccessful attempts at venepuncture. Further attempts can be made by a second person with the participant's verbal consent.

5.16 Withdraw the required amount of blood using the blood collection system. Blood samples should be collected in the following order:

- Blood cultures (aerobic first, then anaerobic)
- Coagulation
- Routine chemistry
- Lithium, heparin
- Trace element
- EDTA
- EDTA for crossmatch
- Glucose/lactate

5.17 Release the tourniquet.

5.18 Hold gauze over the puncture point and then remove needle, only applying pressure once the needle has been removed. Apply pressure for approximately one minute, until the bleeding stops.

5.19 Label the bottles with the appropriate details at the bedside.

5.20 Inspect the puncture point and, if appropriate, apply a plaster.

5.21 Remove gloves and apron and dispose of all waste in the appropriate containers as per the KCH Waste Management Policy.

5.22 Follow the study protocol's instructions on the processing, storage and transportation of the specimens.

6.0 Related documents & References

6.1 KCH Hand Hygiene Policy, Infection Prevention and Control Policy and Waste Management Policy

http://kingsdocs/Pages/Home.aspx

6.2 The Royal Marsden Manual of Clinical Nursing Procedures

www.royalmarsdenmanual.com

6.3 Braun Venepuncture e-Learning Theory Module
http://kweb/kwiki/Cannulation_And_Venepuncture

6.4 Order of draw for blood collection: Order of draw

7.0 List of Appendices

N/A

8.0 Approval and sign off

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