SDRN: Scottish Diabetes Research Network

Collection of Blood Samples from a Peripheral Venous Cannula (PVC)

Clinical S.O.P. No.: 21

Version 1.0

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Review date:	November 2016

CHIEF SCIENTIST OFFICE

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DOCUMENT HISTORY

Version number	Detail of purpose / change	Author / edited by	Date edited
1.0	New SOP	Louise Greig / Alison Sudworth	

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1. Introduction

Peripheral venous cannulation is performed to provide access to the circulatory system. Research studies may require multiple blood sampling. Blood may be drawn from a peripheral venous cannula at frequent time points and to avoid repeated venepuncture. For the purpose of clinical research a peripheral venous cannula may be in situ for a few minutes or hours.

2. Objectives

To provide general guidance on how to obtain blood samples from a peripheral venous cannula and to provide consistency of the procedure.

3. Responsibilities

It is the responsibility of the individual to ensure they are appropriately trained to carry out this procedure safely and that they are documented on the trials delegation log to carry out this procedure.

4. Equipment List

- Couch or chair for the patient
- Trolley/tray
- IV stand
- Antiseptic gel/rub
- Disposable gloves
- Alcohol impregnated wipe
- Tourniquet
- Cannula (18 Gauge - green)(20 Gauge –pink) (22 Gauge-blue)
- Gauze swabs
- Tape to secure the cannula
- Semi-occlusive or transparent dressing
- Selection or appropriate connectors/adapters
- Syringe (for saline flush)
- Sterile sodium chloride for flush
- Giving set
- Intravenous solution
- Vacutainer shield
- Blood sample tubes
- Sharps bin
- Orange plastic disposable bag

5. Procedure

- The delegated member of staff must ensure that the correct participant is identified. The areas to be checked are surname, forename, DOB, research study name, number and hospital number if appropriate.
- Explain procedure to the research participant and obtain informed consent.
- Insert cannula as directed in SDRN SOP No.20**.** Insertion and Removal of a Peripheral Intravenous Cannula (PVC)
- Ensure all study specific documentation is prepared and any blood request forms completed prior to commencing procedure.
- Ensure all blood bottles are labelled correctly prior to commencing procedure.
- Prepare all equipment and make a record of the equipment used e.g., gauge of cannula in the appropriate study documentation.
- Prepare the environment to ensure the comfort and safety of the research participant.
- Prior to commencing the procedure wash your hands following your local hand hygiene policy and use an alcohol rub/gel. (If there is a known allergy to alcohol use an aqueous based alternative.) The wearing of correctly fitting disposable gloves is recommended.
- Remove white cap from the end of the cannula and attach the relevant connection/ valve port.
- Clean the connections/adaptors with alcohol wipes before taking any blood specimens. Allow connections to dry.
- Refer to SDRN SOP NO.4 Venepuncture and Blood Sampling for basic guidance on the procedure for taking blood samples.
- Draw up 1-2mls of 0.9% normal saline in a sterile Plastipak syringe and flush the cannula with this solution. (This confirms that the cannula is patent and prevents clotting. If procedure requires blood samples to be taken at frequent time points from the cannula then the use of a flushing line may be used to maintain vein patency.)
- Record any fluid used to flush the cannula in the relevant study documentation.
- Withdraw 1-2mls of blood and discard this sample. This will ensure the accurate analysis of the results.
- Connect an appropriate Vacutainer leur lock connecter to the cannula and withdraw the required blood samples in the order of priority specified in the study protocol.
- A post sample saline flush will clear the cannula of blood thus preventing cells from adhering to the inner surface of the cannula and clotting which could lead to occlusions.

- Document all blood samples that have been successfully obtained in accordance with ICH GCP guidelines.
- Dispose of all procedure materials and equipment safely and in accordance with local policies.
- On completion of the procedure wash your hands in accordance with local policies.
- For multiple time point blood sampling repeat the above steps.

If any blood spillage occurs the nurse/delegated person should clean up the spillage in accordance with local infection control policies.

6. Additional information

- Record the date, time and name of the person carrying out the cannulation procedure in the specific study documentation.
- Keep the number of lines, lumens and stopcocks to a minimum consistent with clinical need.
- Ensure all samples are stored as directed in the study protocol or prepared and shipped off site according to the study protocol.
- If samples are to be stored locally please ensure you have a sample tracking and freezer log documentation.

Patient focused risks associated with PVC's

- Extravasation
- Entry site infection
- Blood stream infection

The use of peripheral intravenous cannulae can occasionally result in complications. Venous reactions can be painful therefore correct technique, appropriate standards of hygiene and a sound knowledge of the equipment can minimise their occurrences and severity.

It is important that if complications occur they are managed appropriately and documented in the study specific documentation.

Staff focused risk factors associated with PVC's

- All blood should be considered potentially infectious and handled accordingly.