Peripheral Venepuncture Procedure
Objectives.

SSBAT:

- Demonstrate an understanding of the indications and contra-indications of performing venepuncture.

- Describe the preparation of the procedure for the patient.

- State potential complications in relation to venepuncture and implement measures to reduce the incidence.
SSBAT

- Can relate the carrying out of this procedure in line with their Scope of Professional practice (i.e. Competency/Accountability.)

- Demonstrate safe and correct venepuncture on simulation module.
Rationale

- 95% of patients admitted or attending the hospital will have blood tests taken.

- Venepuncture is a highly skilled practice & staff performing same need to maintain their competency.

- Quality blood samples are essential for patient diagnosis and treatment.
Structure of Veins.

**Tunica Intima:**
- Inner coat of an artery or vein consisting of endothelium and varying amounts of connective and elastic tissues.

**Tunica Media:**
- Middle layer of muscular and elastic fibres as well as nerve fibres. These allow the vessels to dilate or constrict in response to vasomotor stimulation via the sympathetic nerves.

**Tunica Externa:**
- Outer layer of the vein and relatively thick. It consists mainly of elastic and connective tissue. However nerves and lymphatic vessels can be found within this connective tissue.

*(Tortora & Grabowski, 2003)*
Difficult patients

- Elderly
- Intravenous drug users
- Oncology
- Needle phobia/anxiety
- Mentally and physically handicapped
- Children
- Language difficulties
- Confused
Special considerations

- Patients under 16 years old
- Haemophiliacs
- Patient with a history of difficult venepuncture
- Patients on anticoagulants
- Diabetics
- Pt with history of CVA
- Pt with history of mastectomy or axillary node clearance
Site Considerations

Areas to avoid
- Near arteries (pulsatile)
- Hard thrombosed veins
- Fibroosed or inflamed areas
- Bruised (Haematoma)
- Area adjacent to infection site
- Recently used sites
- I.V. site
- Fistula
- Vascular graft site

- Skin where dermatitis is present over the vein
- Tendon
- Sides of the body where mastectomy performed
- Scar tissue site
- Burn site
- Fracture site
Antecubital fossa – Basilic, Cephalic, Median, Cubital

Advantages
- Less prone to infection.
- Easily stabilised.
- Used mostly for venepuncture as supports larger volume of blood.
- Facilitates both large and small bore needles.
- Good site for obese patients.

Disadvantages
- High risk for underlying structures e.g. Arteries, nerves, ligaments, valves & tendons.
- Located in area of flexion.
Forearm Veins.

- Can facilitate both large and small bore needles.
- Better choice for patients with restricted joint movement.
Veins of the hand.

**Advantages**
- Easily accessible.
- Lie flat on the back of hand.
- Preferred site for patients post-mastectomy.

**Disadvantages**
- Painful insertion (increased density of nerve endings).
- Difficult to secure.
- Significant risk of infiltration.
- Risk of phlebitis.
- Can only facilitate small bore needles.
Veins of the foot.

**Advantages**
- Suitable for infants and toddlers.
- Can be used in adults as a last resort.

**Disadvantages**
- Higher risk of infection.
- Increased risk of DVT.
List of things never to do when performing venepuncture.

Never

- use the observation chart at the end of the patient’s bed or on the door of the room as a means of identifying the patient.
- take bloods from a patient that does not display an I.D. arm/wrist band.
- leave the tourniquet on longer than 1 minute.
- take blood from a patient standing.
- take blood from a patient with anything in their mouth.
List of things never to do when performing venepuncture Cont’d.

**Never**

- place a tourniquet on a limb where a burn site is present.
- place a tourniquet over a dressing site.
- take blood from cannula site if it has been flushed or used for I.V. fluids/medication.
- put the tourniquet over joint area.
- pre-label blood sample tubes prior to collection.
- place your equipment on the patient’s bed.
- sit on the patient’s bed.
Palpating the vein.

- Put on the tourniquet.
- Place one or two fingers over the vein and press lightly.
- Thumb should not be used as they are less sensitive and have a pulse.
- Some veins may look suitable, but lumens may be narrow or irregular.
Palpating the vein.

Four steps;
- Feel, Roll, Trace, Palpate.

The ideal vein should feel...
- Firm.
- Round.
- Elastic.
- Engorged.
Factors influencing vasoconstriction.

- Dehydration
- Temperature
- Mechanical trauma (tapping)
- Obesity
- Elderly patients with collagen loss/PVD
- Anxiety
- Needle Phobia
- History of fainting
  - (Dougherty and Lister, 2008)
Potential Complications

- Infection
- Haematoma/Bruising
- Haemorrhage
- Fainting
- Excessive pain
- Failure
- Puncturing an artery or a nerve
- Phlebitis
- Needle stick injury
Steps to take prior to insertion.

- Patient identification.
- Explain the procedure.
- Always obtain the patients consent.
- Always present a professional, positive, courteous manner.
- Do not appear hurried.
- Prepare necessary documentation for the procedure.
References.

- AMNCH Hospital Policy


- St James’s Hospital Policy.

Further reading and acknowledgements


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