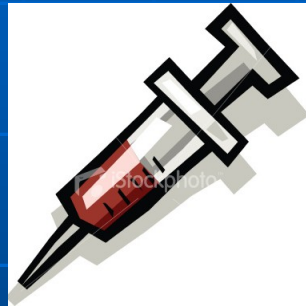


VENEPUNCTURE: PHLEBOTOMY



SHAN KESHRI
Clinical Sessions 2010

aka

BLOOD COLLECTION

INDICATIONS

Diagnostic:

- Obtain blood sample for analysis.

(e.g. systemic problems – Fe anemia, glucose DM, INR, infections, cholesterol, immunology, liver enzymes/ function)

INDICATIONS

Therapeutic:

- treat Polycythemia Vera (elevated RBC volume aka hematocrit)
- treat hemochromatosis (dangerously high iron levels)
- Donation for transfusion

CONTRAINDICATIONS

- Low oxygen levels in blood (hypoxemia)

RISKS

- Infection

- negligible if sterile environment, proper use/disposal of needles, and proper management of samples.

- Hitting a nerve or artery (arterial stab)

- remove needle and apply pressure

SIDE EFFECTS

- Some pain, possible bruising
- Fainting and light headed (vaso-vagal)
- Excessive bleeding
- Haematoma (blood acc. under skin)
- Iron deficiency anemia (in therapeutic phlebotomy)

ALTERNATIVES

- No real alternative to phlebotomy, however there are various different sites on the body that could be used.
- See Method.
- Never attempt more than twice:
 - Refer patient back.

PROCEDURE

Think Action & Rationale!



WHAT are you doing?



WHY are you doing it?

At every
step know:

WASH HANDS

EQUIPMENT: Sterile Tray with:

- Pair of gloves
- Tourniquet
- Alcohol wipes
- Gauze
- VACUTAINER barrel and Needle
- Blood bottles (color coded according to additive e.g. anticoagulant or preservative)

RULES OF ASEPSIS

STEP 2: CHECK PATIENT DETAILS

- Ask full Name, DOB, Gender and compare with blood request form!
- Check blood form has been signed by the requesting doctor
- If special requirements, check patient has complied, e.g. fasting!
- Have you had blood taken before? (preferred vein)

Put Gloves on.

Ensure patient is in a relaxed position.

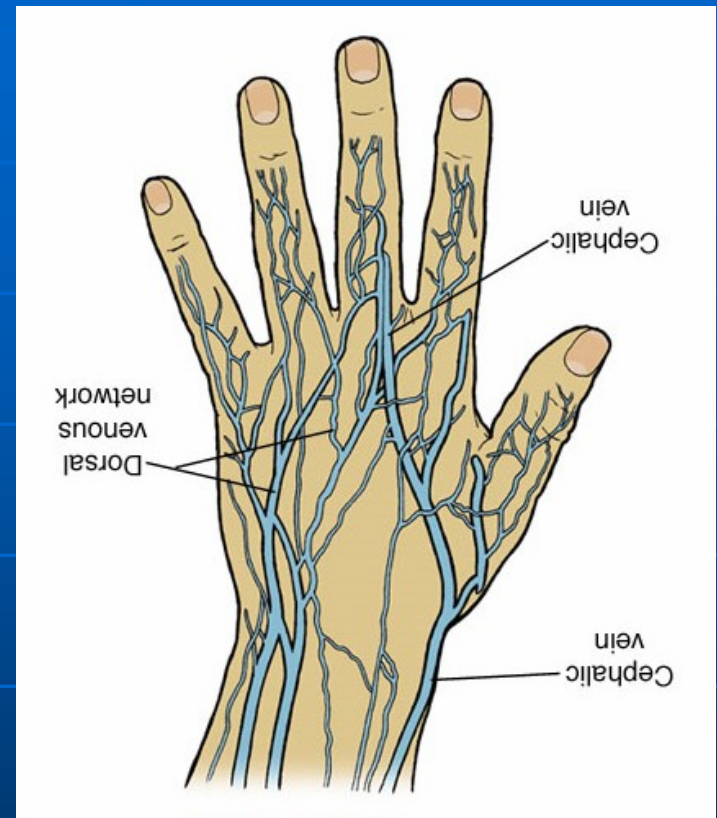
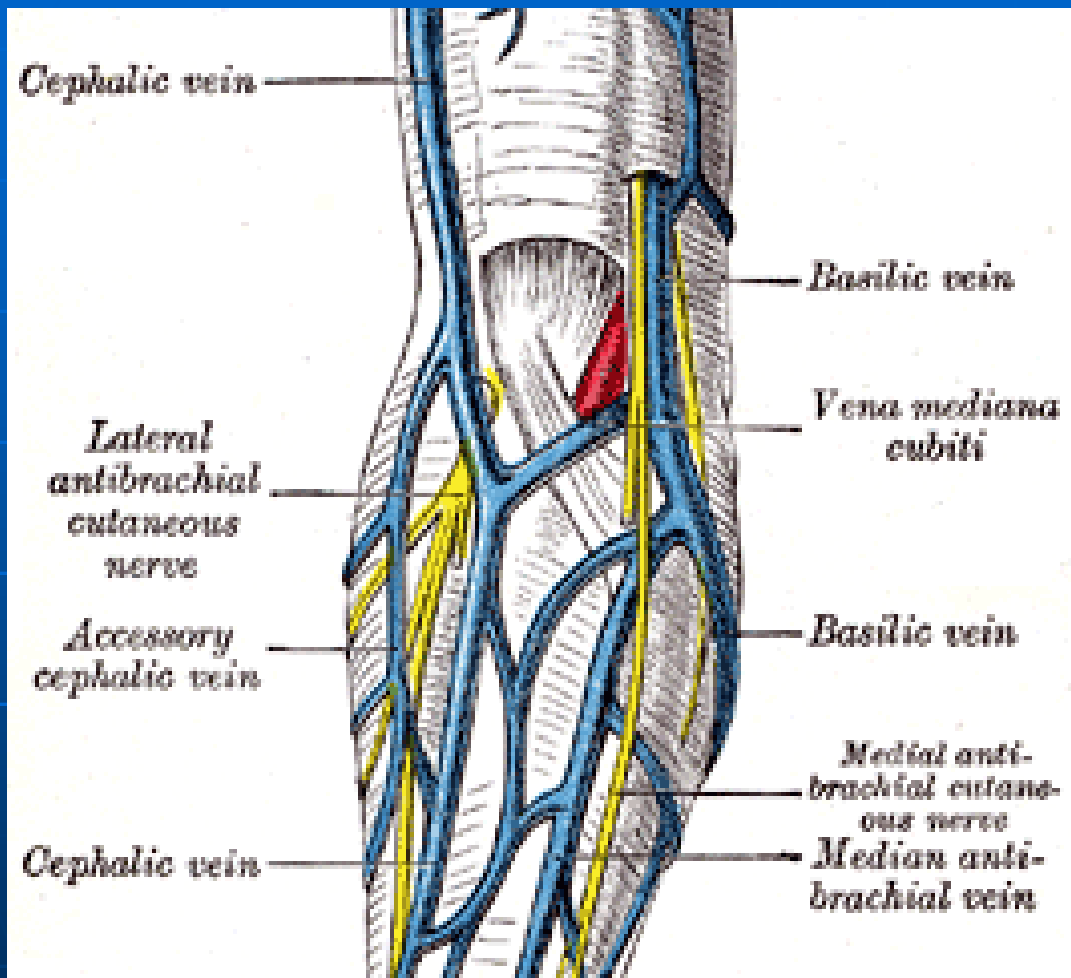
FIND A SUITABLE VEIN

(Palpation: bouncy & large & superficial)

- 90% used – Anterior Cubital Fossa,
– **Median Cubital vein, Cephalic, Basilic Vein**
- Back of hand- **Cephalic (housemans) vein**



- Feet, Central Line, Peripheral Venous line, Femoral stab (groin harder to disinfect)



- Attach VACUTAINER needle to barrel.

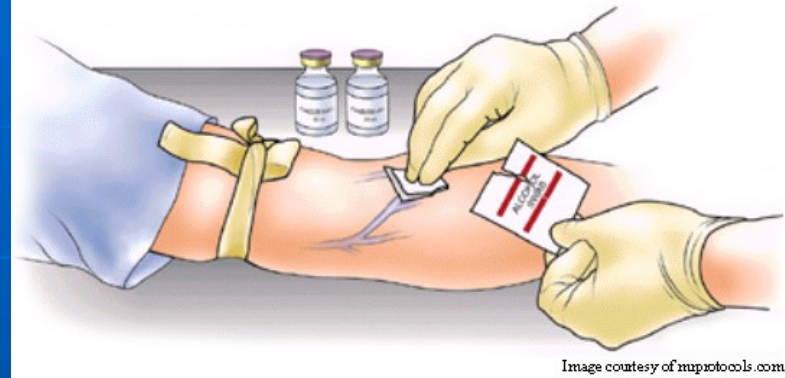


- Apply tourniquet 2 fingers above anterior cubital fossa. (increases pressure)

Inform patient 'this may feel a little tight'.



- Disinfect skin with alcohol wipes.



- Remove cap from needle.



- Warn Patient of Sharp Scratch.

- Stretch skin and insert needle at 15-30 degrees parallel into the vein (bevel edge of needle facing up)



15-30 degrees

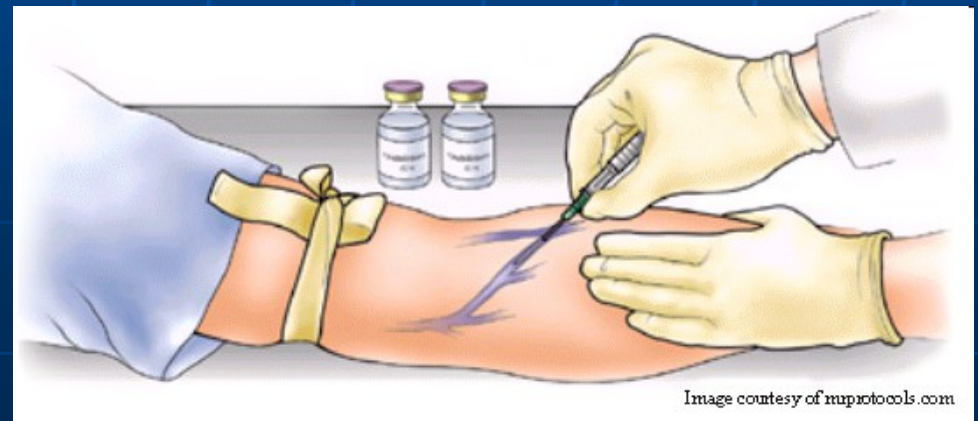
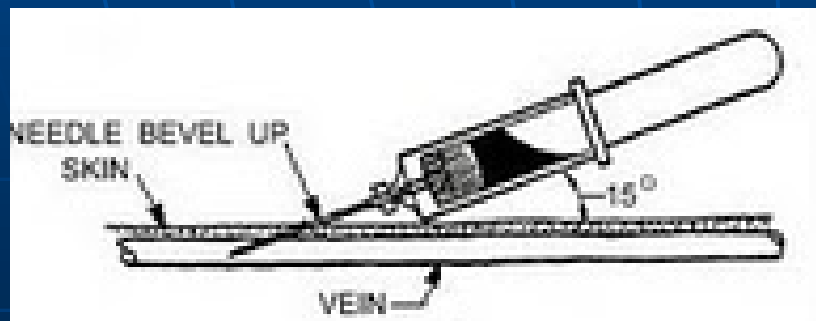
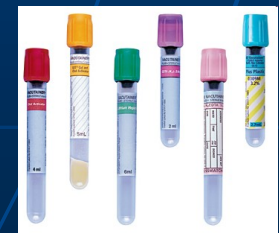


Image courtesy of nuprotocols.com

- Introduce VACUTAINER bottle into the barrel.



- Allow blood to collect. It will automatically stop filling when full.
- NB: Different colour bottles contain different additives and anti-coagulants etc!



- Amount drawn depends on indication (see request form)
- However normally 5-25 ml is enough.

- FIRST Remove blood BOTTLE
- THEN remove TOURNIQUET
- LASTLY, swiftly remove NEEDLE
- Safely dispose needle to sharps bin immediately –NEVER RESHEATH!!



- Apply gauze to puncture site for 1 minute, with some pressure.
- Remove gloves and wash hands

MANAGEMENT

- Invert blood bottle to ensure blood mixes with the additives in specimen bottle

Label blood bottle:

- Patient Name
- Identification Number
- Date & Time ...etc
- Document in patient record.
- Send to Pathology lab for analysis.

WASH HANDS

OLD UK / CURRENT CZ METHOD

- *MONOVETTE SARSTEDT VACUUM TUBES*
 - Pull syringe to create vacuum, then slot into needle.
 - When full, snap off handle



To Prevent Hematoma!

- Puncture only the uppermost wall of the vein
- Ensure needle fully penetrates uppermost wall of the vein. (Partial penetration may allow blood to leak)
- Remove tourniquet before removing needle (decreases pressure)
- Use major superficial veins
- Apply pressure to the puncture site

Protect Yourself!

(in addition to what has been mentioned)

- Change gloves between patients.
- Clean up spills with disinfectant.
- Do not break, or recap needle.
(avoid accidental needle puncture or splashing of contents)

Protect Yourself!

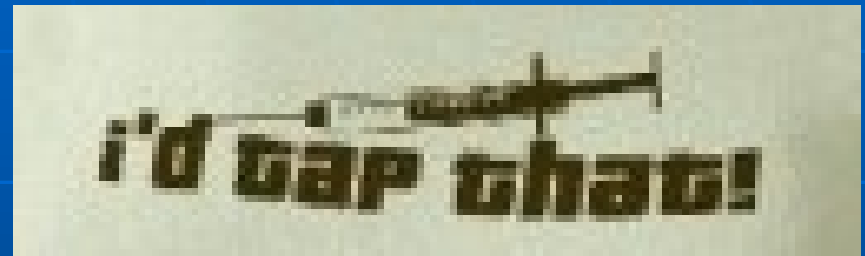
(in addition to what has been mentioned)

- In Event of being pricked with needle:
 - Remove and dispose of gloves.
 - Squeeze puncture site to promote bleeding.
 - Wash area well with soap and water.
 - Record the patient's name and ID number.
 - Follow institution's guidelines regarding treatment and follow-up.

NB Prophylactic zidovudine following blood exposure to HIV has shown effectiveness.

SUMMARY

- Tourniquet
- Antiseptic wipe
- Palpate
- Insert
- but be gentle!



- Don't forget Safety and Communication.

VIDEO



http://www.youtube.com/user/vanitagoss#p/a/u/1/9V_5Dgr9ozM

THANKYOU FOR LISTENING