‘ChemoPort Access’ – Guidelines & Demonstration

This CME is being conducted under the educational grant from ACF

What is Implantable Chemoport ?

- Ports are a type of **Totally Implantable Central Venous Access Device** used for intermediate and long term therapies.
- A Catheter attached to a self-sealing silicone septum surrounded by a titanium, stainless steal or plastic port
- Port sutured under the skin, usually in the chest wall.

What is Implantable Chemoport ?

- A catheter extending from the reservoir is inserted into a major vein with the tip residing in the Superior Vena Cava.
- No part of the device is exposed outside the body
- Can deliver Chemotherapy, TPN, Antibiotics, Blood products and Blood sampling
- Also possible to inject CT – contrast medium through “Power Port”

Chemoport : Indications

- Patients requiring multiple sites for IV access
- Patients lacking useable peripheral IV sites
- Patients requiring long term chemotherapy, fluids etc.
- Patients subject to frequent blood transfusion or sampling

Chemoport : Advantages vs Disadvantages

Advantages	Disadvantages
• Internal device, no frequent dressing or site care • Long term Solution • Less chance of infection • More patients compliance	• Surgical procedure for insertion & removal • Special needle access is required

Chemoport Pack :

Secureport Pack contains the following :

- 1 chemoport (PLP Vol: 0.36ml /Ti Vol 0.82ml)
- 1 8FR 65 ShA Silicon catheter (length 450 mm / Vol 0.82ml)
- 1 luer connector
- 1 introducer needle 18G
- 1 Huber needle straight
- 1 right angled 20GA Huber needle 1’’
- 1 J guidewire 0.035’’
- 1 peelable dilator
- 1 tunneler
- 2 x 10ml syringes

Chemoport: Some Considerations

- Sites:
  - ❑Subclavian
  - ❑Internal jugular
  - ❑External jugular
  - ❑Misc.: Basilic, Brachial, Femoral

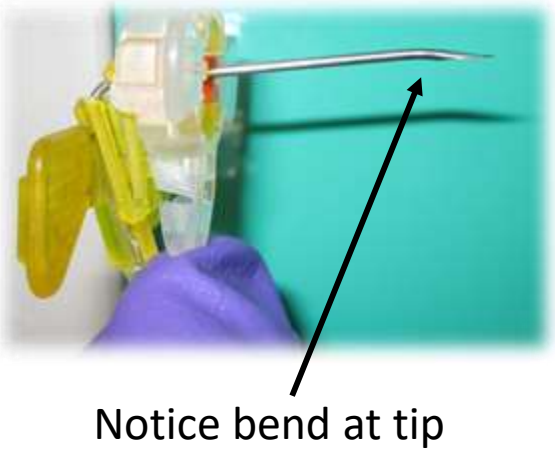
- Ideal place for Port placement:
  - ❑Good Port stability
  - ❑Does not interfere with patient mobility
  - ❑Does not create pressure points
  - ❑Does not interfere with clothing

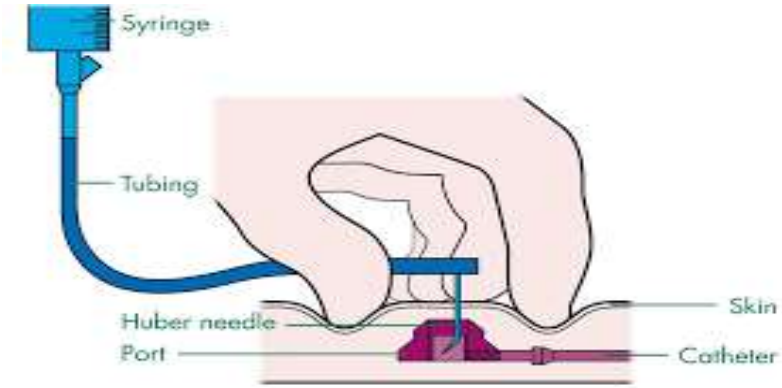
Catheter Insertion Point

Location	Advantages	Disadvantages
Internal Jugular	• Bleeding can be recognized and controlled • Malposition is rare • Less risk of pneumothorax	• Risk of carotid artery puncture • Chance of sharp kink • PTX possible
Subclavian	• Most comfortable for conscious patients	• Highest risk of PTX • Should not be done if < 2 years • Vein is non-compressible • ? In intubated patients

Accessing Chemoport : Huber Needle

- Chemoport can ideally be accessed with special needle called a HUBER needle
- Contains a deflecting, non-coring point
- Choice of needle length is determined by surgical placement of PORT and patient dimensions. A PORT that is deep in the subcutaneous tissue will require a longer needle than a PORT that is easily palpated
- A standard hypodermic needle should never be used, it will damage the PORT





Accessing Chemoport :Syringe

- Do not use syringes smaller than 10ml
- Smaller syringes increase pressure in the catheter wall and increase the risk of rupture of the catheter

Handling & Management of Chemoport

Confirmation of Placement :

Every time the PORT is accessed, the doctor/ nurse is responsible for confirming correct placement by:

- Feeling the non coring needle hit the base of the PORT
- Aspiration of blood
- Ability to easily infuse solutions
- Normal appearance of PORT site
- Ensuring there is a written X-ray report confirming correct placement of PORT available in patient record

Handling & Management of Chemoport

Accessing PORT:

- Always use a sterile technique when accessing a PORT
- Prime a non coring needle with normal saline
- Leave syringe with normal saline attached to bung/ three way tap and non coring needle; Clamp
- Clean skin with skin prep: Chlorhexinine ± Povidone Iodine
- Palpate the dome to determine for location and depth of PORT
- Stabilise port with non dominant hand
- Insert needle until you feel the resistance from the back of the PORT
- Aspirate for blood return to check patency and position
- Flush with 10 ml normal saline in pulsatile manner
- Secure needle with sterile occlusive dressing
- Continue treatment as ordered i.e. commence IV therapy

Video Demonstration

Flushing:

- Flushing in a pulsatile (stop/start) manner to create turbulence within PORT with Normal Saline 10ml
- On accessing the PORT, to determine patency
- Before and after drug administration
- If disconnecting the line, always flush with 10ml normal saline, even if only disconnecting for a few minutes
- Before removing the non coring needle, flush first with normal saline 10ml and then lock with strong heparin (1000 IU diluted in 10 ml normal saline- give 5ml)
- Access the PORT and repeat this process every 4 weeks when not in use

Recommended flushing volumes:

FLUSHING VOLUMES	
PROCEDURE	VOLUME
Port not in use	5cc heparinized saline
After each infusion of medication or TPN	10cc sterile normal saline then 5cc heparinized saline
After blood withdrawal	20cc sterile normal saline then 5cc heparinized saline

Heparin Lock

Heparin Lock - Strong

- Strong Heparin Lock (Heparinization) – 1000 IU diluted in 10 ml Normal Saline
- Is ALWAYS required prior to removal of non coring needle from the PORT
- To give 5 ml
- This is required every 4 weeks when PORT not in use

Heparin Lock – Weak

- Weak Heparin Lock (Heparinization) – 50 IU diluted in 5ml Normal Saline
- Is **only** required if a positive pressure bung is **NOT** attached, but the needle is to remain in situ for intermittent ongoing care i.e. Antibiotics 6 hourly
- If disconnecting the IV, even for 5 minutes, use weak heparin lock

  ** Remember never use a syringe smaller than 10ml*

Changing a Dressing:

- Always use an aseptic technique
- Always change the dressing with non coring needle and cap/bung change
- Also change the dressing whenever it is soiled, damp or loose but no greater than 7 days

Changing an IV Line:

- A clean technique* is required when the system is closed (bung is in situ)
- Continuous IV infusion lines changed every 72 hours
- Intermittent IV infusion, change line with each infusion
- Change IV TPN/Lipid line every 24 hours
- Blood product infusion sets changed to an IV infusion set on completion of the blood product infusion

** Recommended clean technique: wash hands, clean gloves and clean bung with 3 alcohol swabs and allow to air dry before proceeding to access a closed system*

Blood Sample Collection:

- Perform initial flush to determine patency (except for blood cultures)
- Discard the first 5 ml of blood withdrawn before collecting sample (except for blood cultures)
- When taking blood cultures do not perform initial flush to determine patency, do not discard a sample. Retain initial sample for blood culture
- Flush PORT with 20 ml of Normal Saline after blood sampling
- Continue with treatment as ordered and / or heparinization if required

Chemoport Complications

- Blockage
  - Difficulty flushing and/or aspirating blood
  - Thrombosis
- Infection
- Extravasation –
  - Leakage of fluid around needle, out of the port reservoir, or catheter, into chest wall

Complication Management

Blockage of lumen

Difficulty flushing and/or aspirating blood

- Ensure any clamps are open
- Check needle length is adequate
- Change cap or bung
- Change position of patient
- Consult physician (for nurses)

Infection

- Pain and swelling at PORT site maybe suggestive of infection. Do not access PORT and consult physician
- Septic shower (the flushing of bacteria that has collected in the PORT) may occur in the absence of obvious infection at PORT site. Consult physician
- Septic shower may occur immediately after flushing due to infection in the line. There may be an absence of obvious infection at entry however the patient will experience rigors and generally feel unwell.
- Consult physician

Extravasation

Leakage of fluid around needle, out of the PORT reservoir, or catheter, into chest wall

- Consult physician
- Check connections between needle and IV line are not loose
- Dressing may be wet from shower or patient's perspiration. Change dressing
- Pain and swelling of PORT site may be a symptom of extravasation
  - Needle may be misplaced – remove needle and insert new needle, ensuring it reaches the bottom of the PORT. Observe for extravasation of fluid
  - If extravasation occurs into tissues, cease infusion and follow local policy

Documentation

Clear, consistent documentation is essential after each treatment or shift. This should include:

- Ability to confirm placement
- Medications and flushes administered
- Strength of heparin lock (if used)
- Size and type of needle used for accessing
- Type of bung/cap used
- Dressing change
- Signs and symptoms of infection or thrombosis
- Troubleshooting

* *Written x-ray report confirming correct placement of PORT on insertion should be available in patient record*

1700+ PORTS

& still counting...

We feel encouraged that we have been able to support your patients.

Thank you!

for your trust & confidence in us.

SECURE PORT