

Rickham Reservoir

This device is used to deliver ventricular (intra-thecal) chemotherapy via a small reservoir. It is usually sited on the anterior aspect of the head.

Purpose

- To facilitate safe administration of ventricular chemotherapy.
- To ensure patient safety and safe delivery of a cytotoxic agent.

Audience/Scope

This scope of practice is limited. Refer to the intrathecal policy and register on the pharmacy intranet site.

Registered nurses whose name appears on the intrathecal register.

Registered Medical Officers whose name appears on the intrathecal register.

Associated Documents

- Intrathecal Policy CDHB Preparation, transport and administration of Intrathecal chemotherapy
- Volume 12 Fluid and Medication manual CDHB
- Legal and Quality Volume 2 CDHB

References

Journal of Neuro-oncology, 1998, 38, No. 2-3, 141-143. Reservoir Systems for Intraventricular Chemotherapy.

[Acta Neurologica Scandinavica](#). 1970; 46: Suppl 43:287.

Intrathecal cytotoxic treatment of cerebrospinal leukaemia through a Rickham reservoir

Equipment

Dressing pack
Chlorhexidine 2%/Alcohol swab
Sterile gloves
23g needle
20 ml syringe

0.9% normal saline flush

Chemotherapy

Pre Procedure

1	Ensure written consent is gained prior to the procedure and appropriate bloods are reviewed and within acceptable limits
2	Medical staff whose name appears on the register will collect the chemotherapy from Pharmacy
3	Explain the procedure to the patient
4	Obtain a full set of recordings prior to the procedure
5	Check if IV chemotherapy has already been given
6	Prepare equipment maintaining a sterile field
7	Perform full chemotherapy checking process with drug and patient prior to commencing procedure

Procedure

NB	This is a two person procedure, it should never be performed alone
1	Palpate ventricular reservoir to locate appropriate insertion site prior to hand wash and donning sterile gloves
2	Clean site with 2% chlorhexidine/alcohol swab and allow to dry for 30 seconds
3	Place sterile sheet around ventricular site
4	Insert 5 ml syringe onto needle
5	Insert needle into ventricular reservoir at 90 degree angle
6	Withdraw 5 mls of CSF
NB	It is extremely important not to have any air in the reservoir <u>at any stage</u>. Draw back on the syringe and move air to plunger end and do not inject – this can cause pneumocephalus which may cause the patient to experience headaches/pain.
7	Remove the CSF syringe
8	Insert the chemotherapy syringe with fresh needle attached into reservoir at 90 degree angle and inject chemotherapy mixing intermittently with CSF, without inserting any air into reservoir
13	Remove chemotherapy syringe/needle and apply pressure to scalp (generally bleeds) until bleeding ceased and apply pressure dot if able

Post Procedure

1.	Dispose of used equipment into appropriate waste areas i.e. cyto bags
2.	Send 5mls of CSF for cell count, gram stain, mc+s, protein, glucose and cytology if required.
3.	Post procedure observations are the same as for intrathecal medication administration.
4.	Medical staff will decide how long the patient is to stay post procedure.

List of possible complications

1	Aseptic/chemical meningitis
2	Headache, blurred vision and loss of balance,
3	Device-related infections
4	Unidirectional catheter obstruction
5	Myelosuppression

