

UHS RSCH ICU Neurosurgical Prompt Cards

Care of the patient with an External Ventricular Drain (EVD)

EVD POSITION & DRAINAGE:

- EVD must hang on a dripstand at all times – do not lay on bed (e.g. when transferring patient) unless clamped shut
- Level zero point of EVD to the External Auditory Meatus (EAM) at all times (see diagram)
- EVD chamber height is set by neurosurgeons:
Usually 5-20cmsH₂O
- EVD must be open to drainage at all times **UNLESS** turned off by neurosurgeons (e.g. as 'challenge' of EVD before removal) or patient being repositioned or transferred. Minimise how long the EVD drainage is turned off for transfers and repositioning
- If turning/repositioning patient, turn EVD off to drainage during procedure and then re-level zero point to EAM and reopen to drainage

PATIENT OBSERVATIONS & METAVISION RECORDING:

- Record drainage of CSF into chamber **hourly**: amount/colour and note whether CSF is 'swinging'
- When emptying the CSF chamber into the collection bag, the zero point stopcock must be turned OFF to drainage (prevents rapid siphonage of CSF from the ventricles into chamber). Open the stopcock again once the collection bag tap is closed
- Record set EVD chamber height (set by neurosurgeons)
- When EVD is 'challenged' – neurological observations **MUST** be increased to hourly. Any deficits must be reported to nurse in charge, ICU medical team & neurosurgeons

EVD SITE DRESSING:

- Ensure EVD site covered with sterile occlusive dressing

EVD BAG CHANGES:

- Change EVD collection bag aseptically once it is $\frac{3}{4}$ full

TROUBLESHOOTING:

- If EVD stops swinging or draining – inform nurse in charge, ICU medical team & neurosurgeon immediately, check for any obvious kinks/blocks and increase frequency of neurological observations
- Inform nurse in charge, ICU medical team & neurosurgeon if CSF drainage increases >10mls/hr above baseline for patient or if drains >25mls in one hour

CSF SAMPLING & INTRATHECAL ANTIBIOTICS:

- CSF sampling and/or instillation of antibiotics into EVD (intrathecal ABs) is **only carried out by neurosurgeons**. If ABs given intrathecally, neurosurgeons will advise when drain can be reopened again

ACCIDENTAL REMOVAL:

- On the rare occasion that the EVD is accidentally removed by patient, or dislodged when patient is moved - please keep the drain to show the neurosurgical team so they can check that the drain has not snapped **NB** there is a risk of the tip being retained in the brain

