



มหาวิทยาลัยราชภัฏนครปฐม



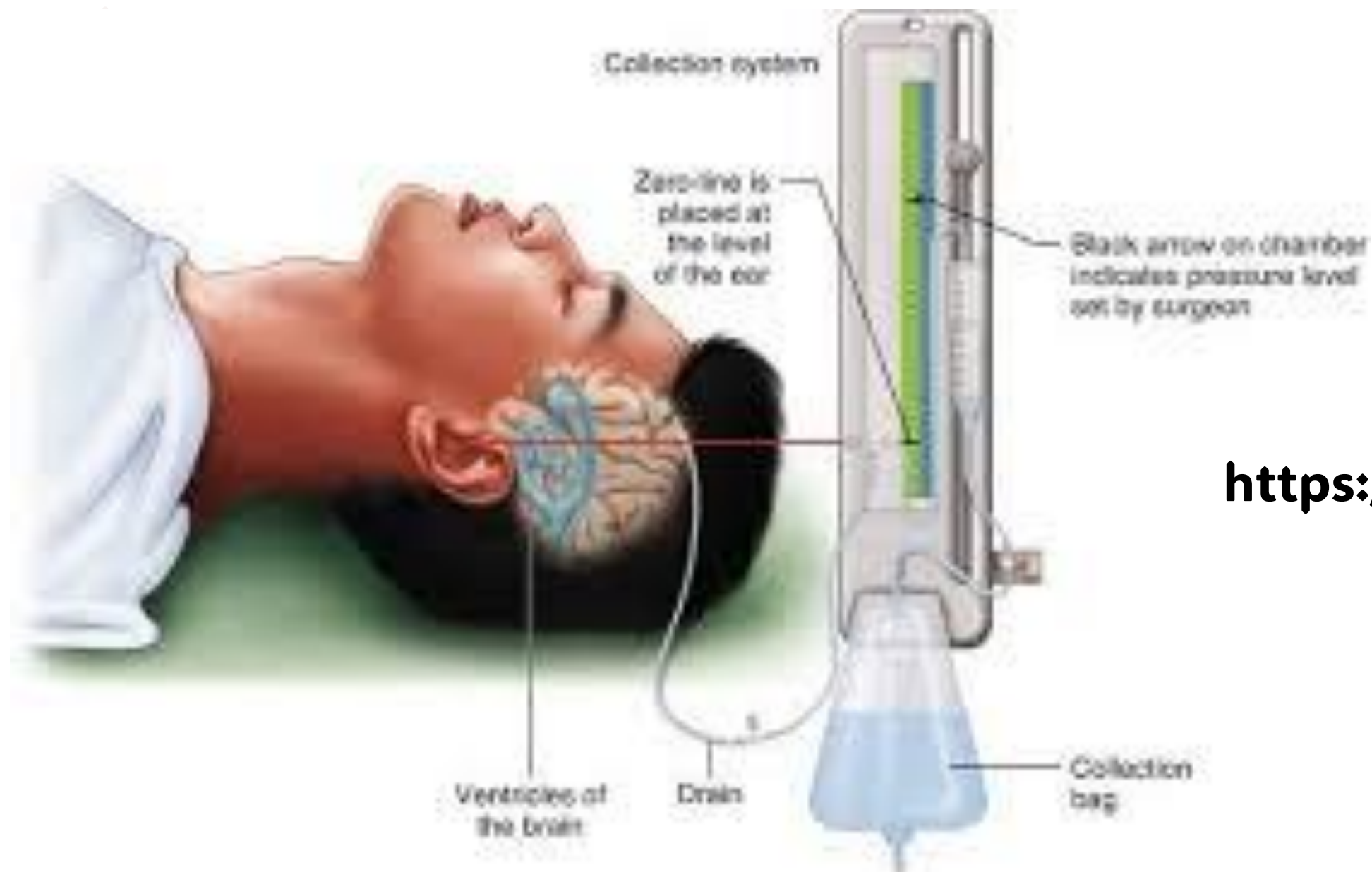
Adult and Geriatric Nursing Practicum 2

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ventriculostomy Care



External ventricular drainage (EVD)



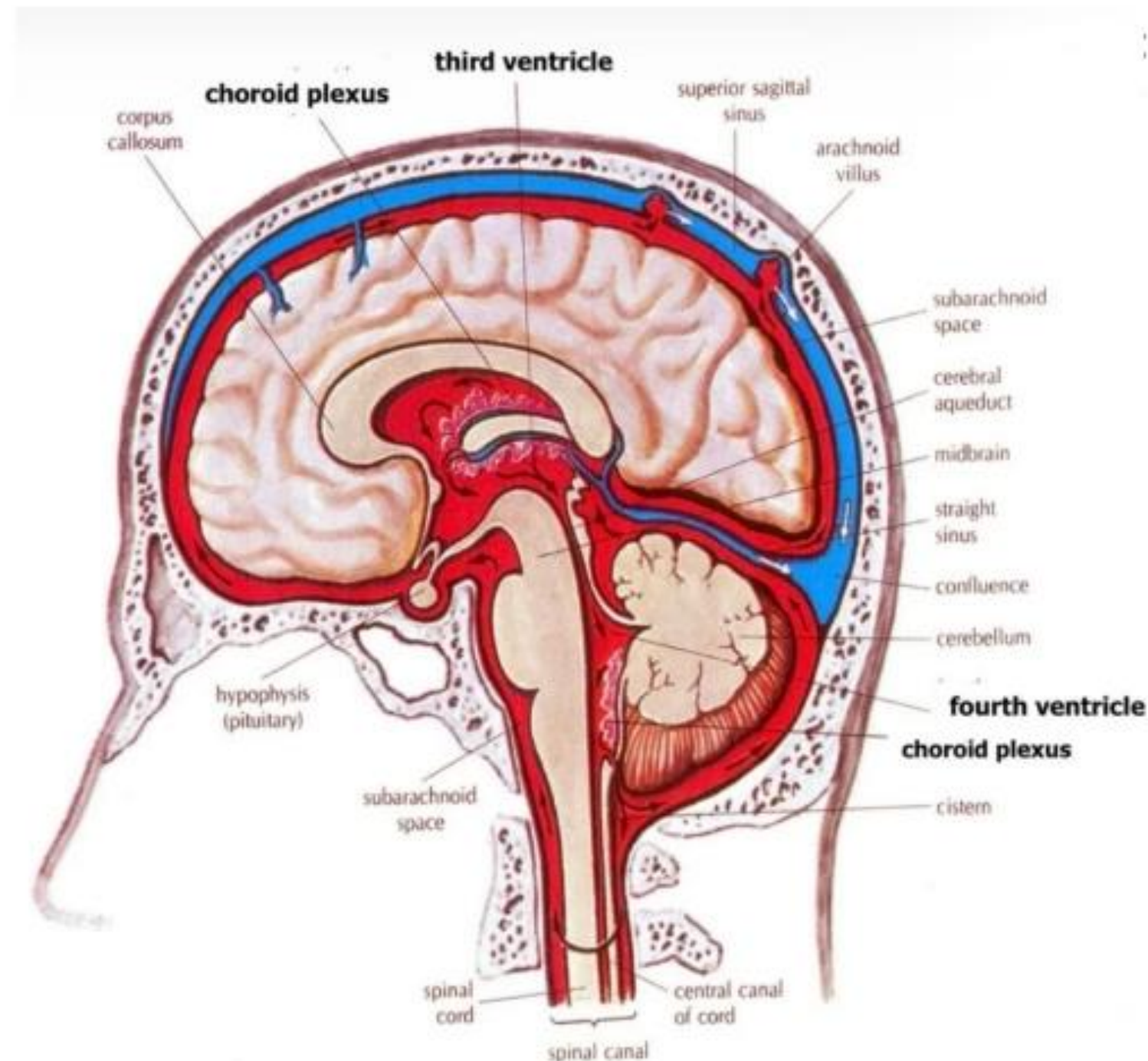
<https://images.app.goo.gl/acv9uPHgrVR4ksPT7>

ventriculostomy Care



Hydrocephalus

- Formed from choroid plexus
- 14-36 ml./hr.
- 500 ml./day
- in the ventricles 20-50 ml



(ชนน งามสมบัติ, 2559)

<https://www.album-online.com/en/search?iSF=3&sT=PITUITARY&iSp=0&sGs=mosaic>

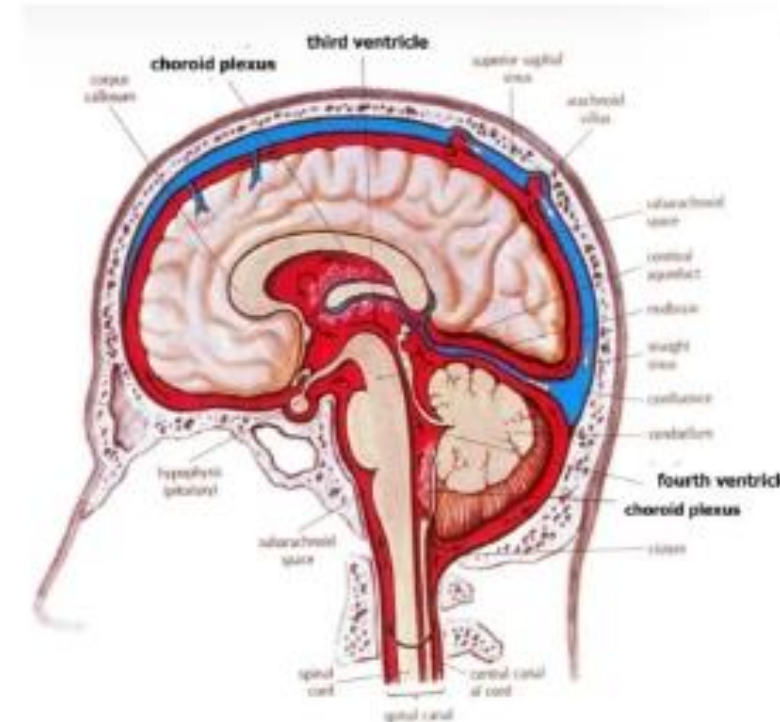
ventriculostomy Care



Hydrocephalus

Communicating hydrocephalus

- Infection
- subarachnoid hemorrhage
- choroid plexus tumor.
- Hydrocephalus Ex Vacuo



Non-communicating hydrocephalus

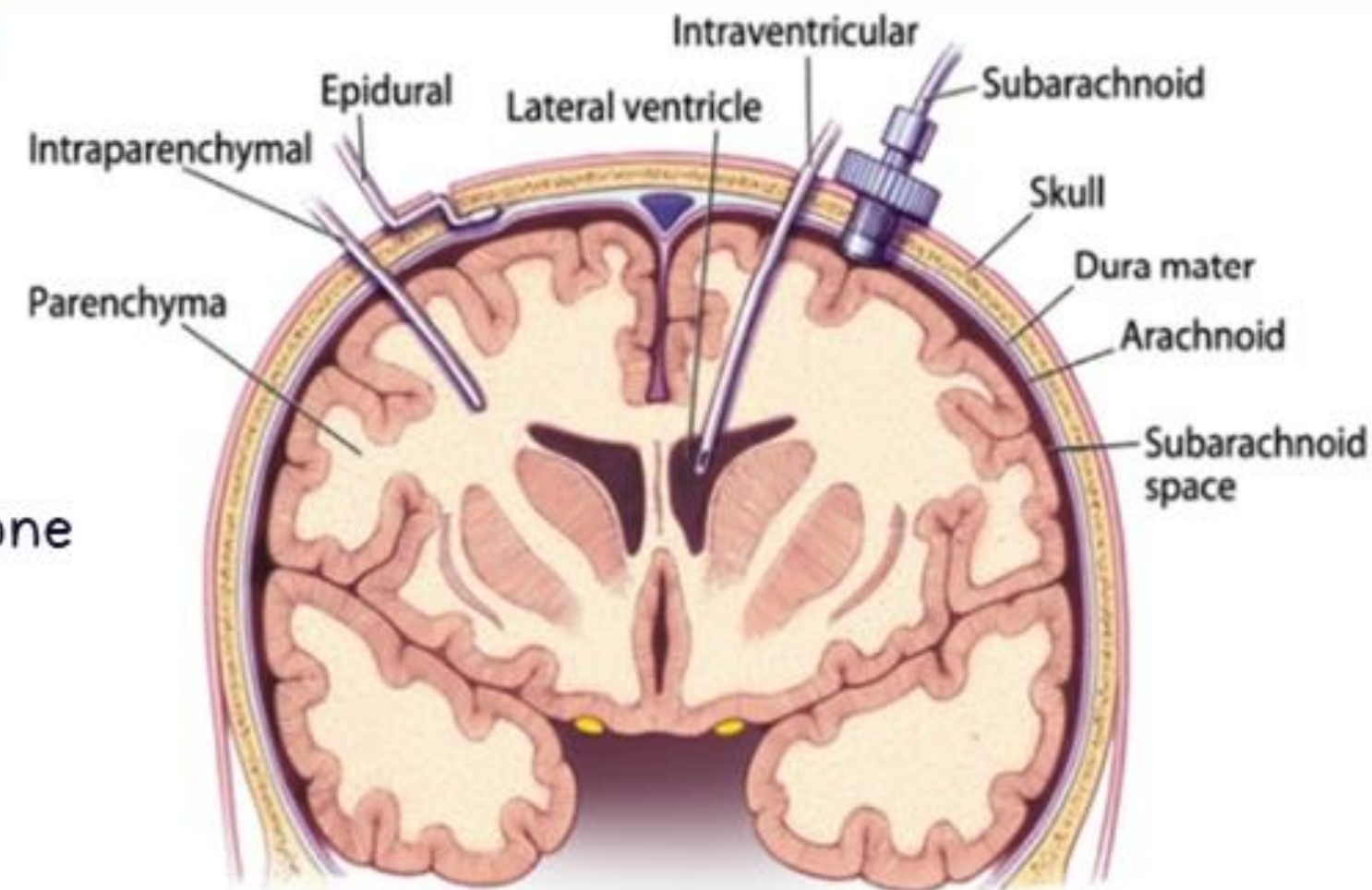
- Aqueductal stenosis
- cerebral aqueduct Obstruction
- Tumor

ventriculostomy Care



EVD catheter

- EVD catheter , Insert twist-drill craniotomy at Kocher's point, frontal bone
- catheter tip at frontal horn for lateral ventricle or third ventricle
- right hemisphere (non-dominant hemisphere) for language prevent language dysfunction



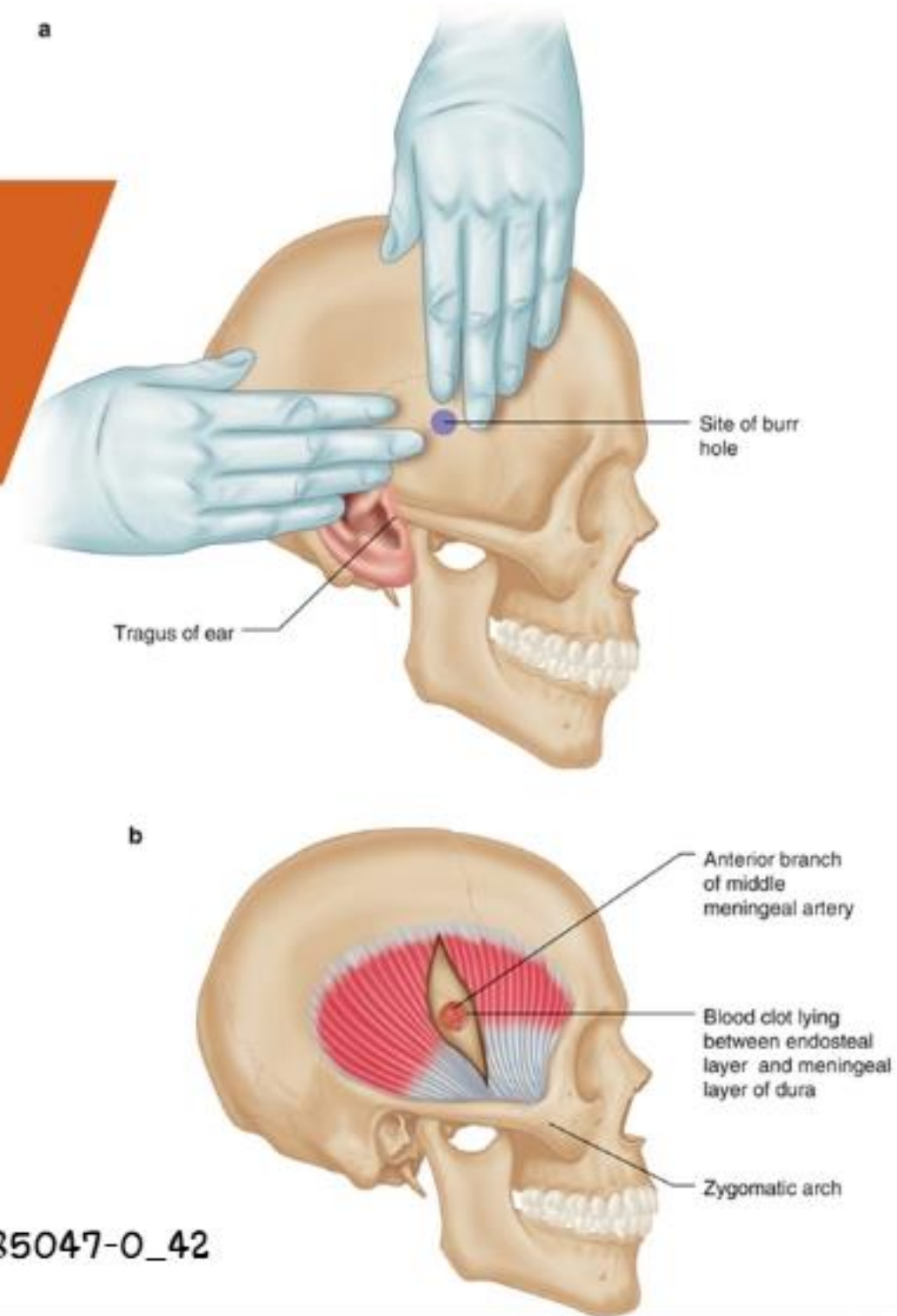
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(Xia et al., 2019; ไสว นรสาร และ พิรญา ไสใหม่, 2559)

ventriculostomy Care



Burr Hole Craniotomy



https://link.springer.com/chapter/10.1007/978-3-030-85047-0_42

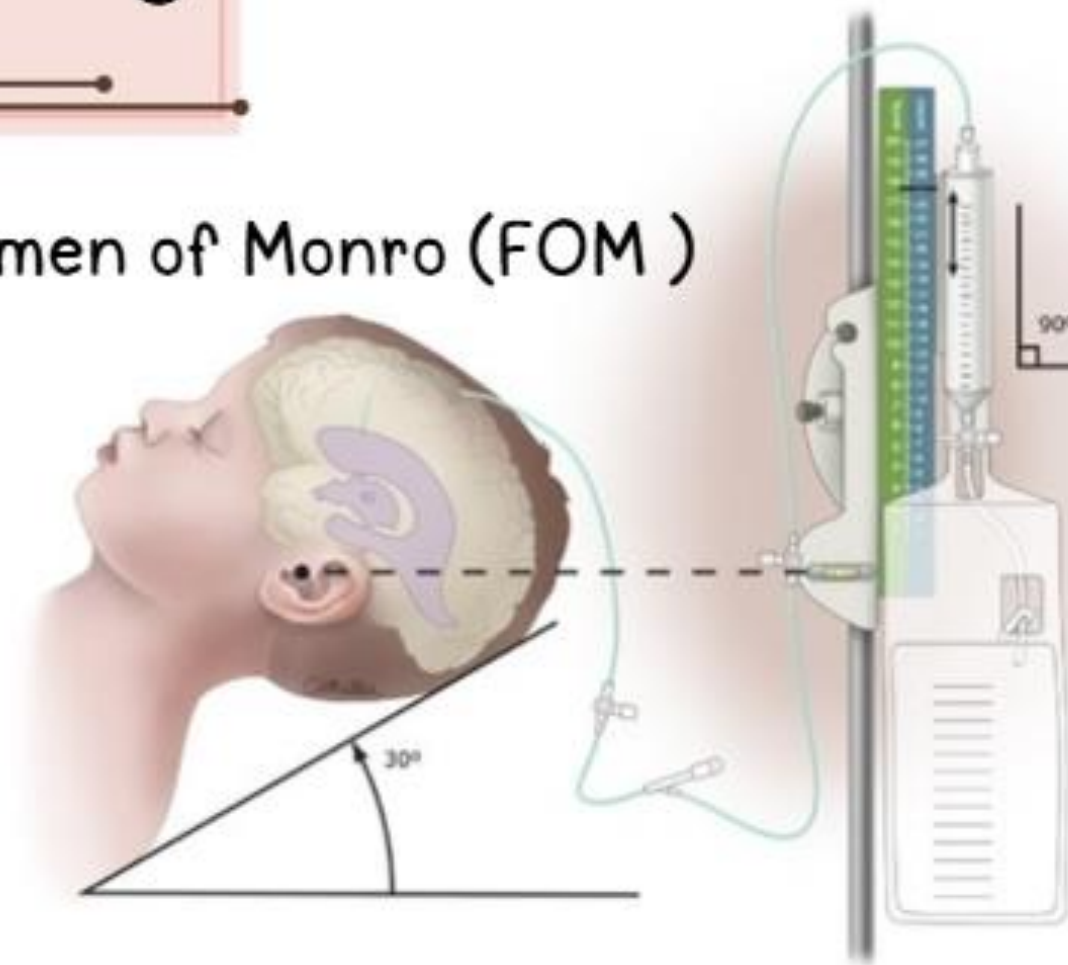
ventriculostomy Care



pressure transducer Setting



Foramen of Monro (FOM)



ventriculostomy Care

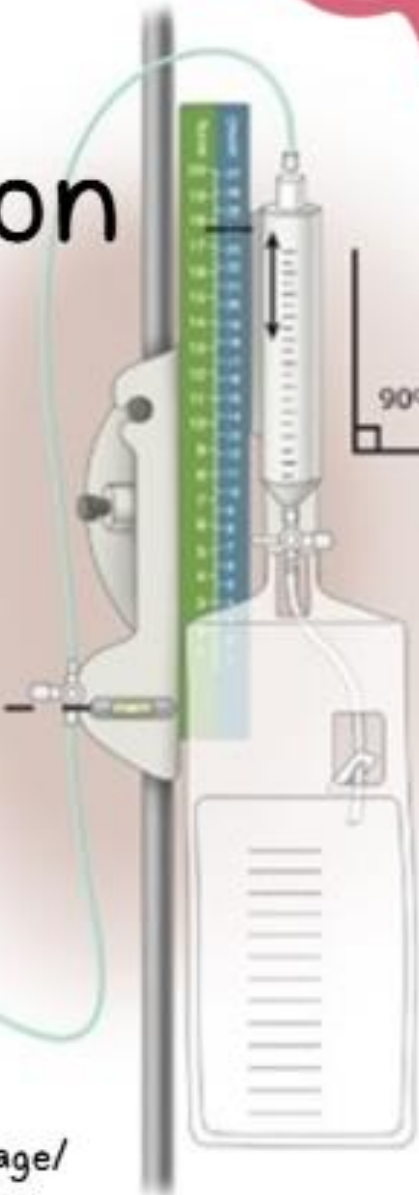
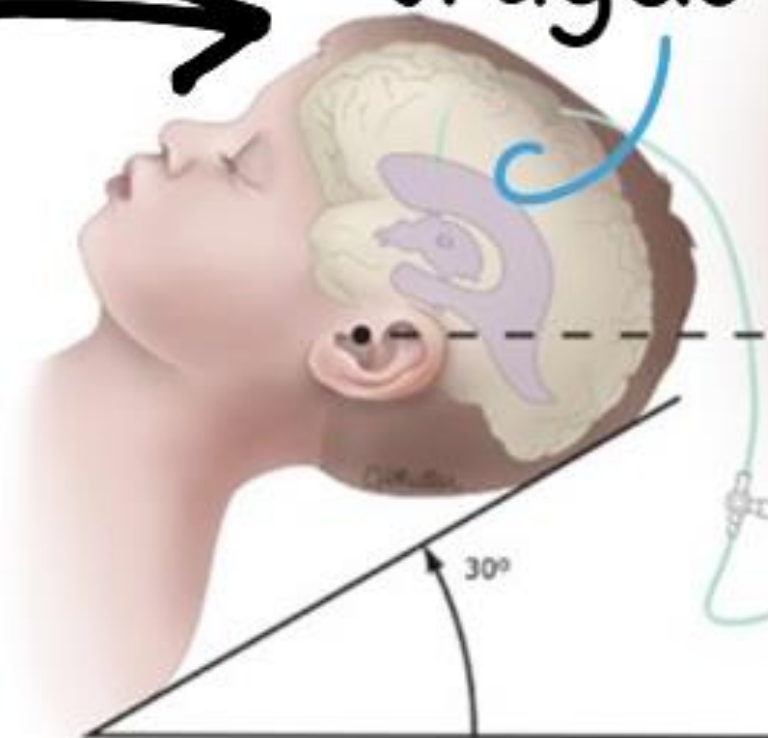


pressure transducer Setting

Side-lying position

mid sagittal line

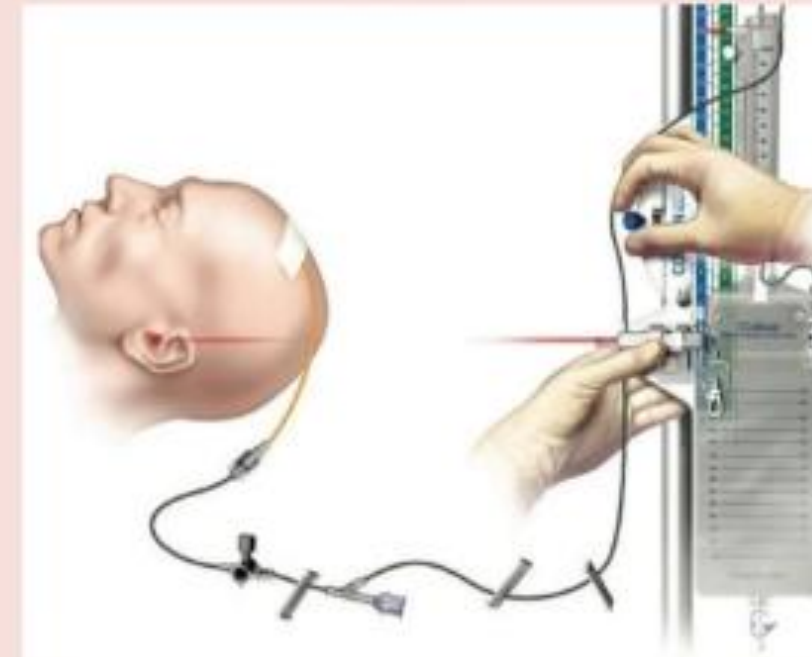
Supine position
tragus



ventriculostomy Care



Zero-point



1. Clamp EVD before changing position every time.



2. semi fowler position 30°



ventriculostomy Care



pressure transducer (dropping point) is higher than FOM

- This will result in low ICP readings
- inability to drain CSF

The pressure transducer level is below FOM.

- CSF overdrainage
- collapsing of ventricles
- Brain herniation

3. Zero-point Setting



ventriculostomy Care



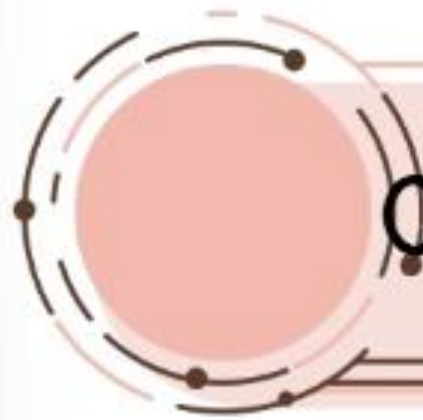
- Observe the CSF in the EVD line.

- Check the bending of EVD
- Close system
- Do not milking

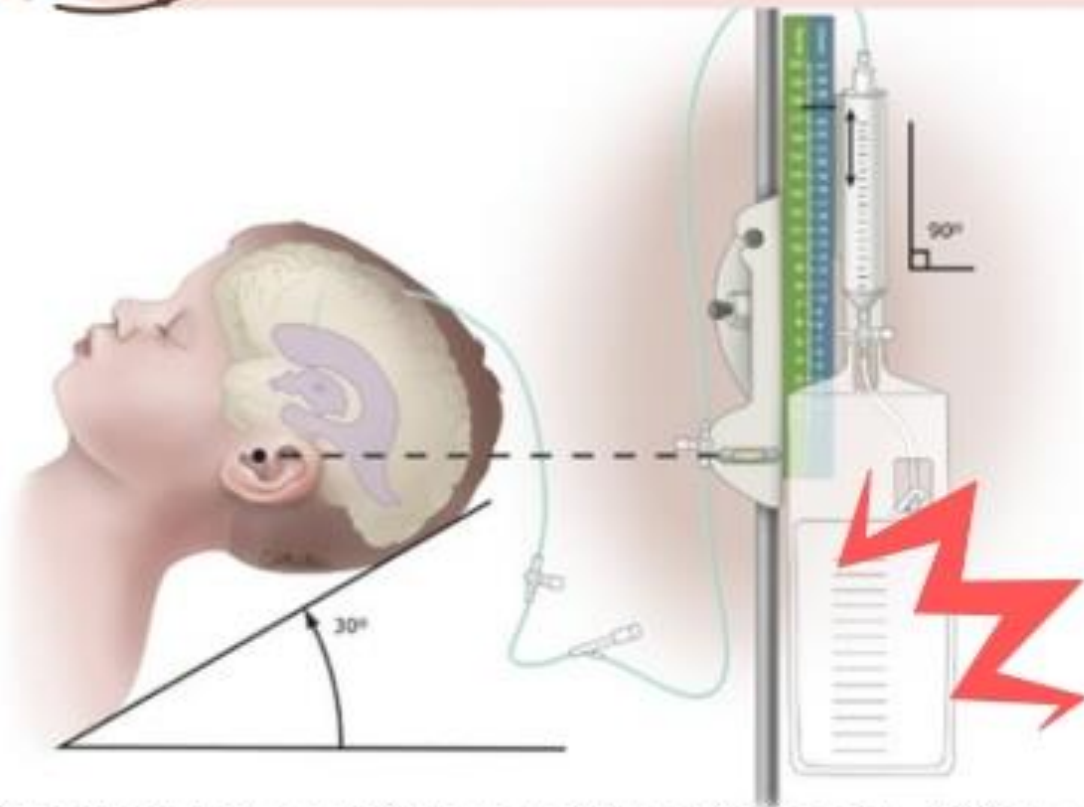
- Clamp EVD for no more than 30 minutes
- Povidone-Iodine 10% w/v or 2% chlorhexidine + alcohol applied to the joint for 3 minutes if the joint is dislocated.



ventriculostomy Care



Clamp EVD as soon as it comes loose.



- Record CSF q 8 hr.
- If there is no increase in CSF or CSF drainage is more than 30 ml per hour , Notify

<https://handbook.boehs.ca/clinical-practice-guidelines/pr-clinical-procedure-guide/pr42-evd-monitoring-and-drainage/>



ventriculostomy Care



Dressing wound

aseptic technique

ventriculostomy Care



Monitor sign and symptoms

q 1-2 hr.



- V/S
- Sign and symptom of IICP
- GCS

- Sweating
- Cold
- Drowsiness
- Rapid heartbeat
- Headache
- Vomiting
- Headache
- Severe nausea, vomiting
- Blurred vision
- Changes in sensation



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