Lumbar Drains for Aortic Endovascular or Surgical procedure : 2011 Protocol

Lumbar drains are being used in Endovascular & Surgical cases (AAA) cases to reduce the risk of spinal cord ischemia and paraplegia (improve perfusion related to spinal cord edema)

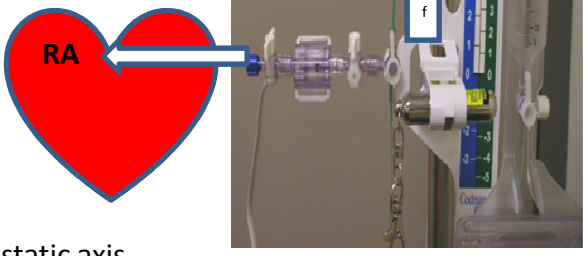
The same Codman external drainage devise is used for the ventric & the lumbar drain. Please be aware of the difference in care !

CONTINUOUS MONITORING with INTERMITTENT DRAINAGE

GOAL: Maintain CSFP < 10mmHg

Transduce Cerebrospinal Fluid Pressure (CSFP) :

- Position patient HOB 30°
- Level **transducer** to **phlebostatic axis** (Yes! The right atrium)
  4th Intercostals space Mid Anterior / Posterior chest
- Level the **cylinder** to **10 cmH20**
- Continuously transduce **CSFP**
  Turn stopcock off toward the cylinder
- Read waveform on end expiration
- Calculate **Spinal Cord Perfusion Pressure (SCPP)**
  (MAP – CSFP = SCPP)



•Intermittent Drainage

- Maintain HOB 30° and level of transducer at phlebostatic axis
- Drain **only** the prescribed amount (never leave patient)
- Drains by gravity! Draining too fast may cause "spinal" headache

For CSFP > 10mmHg Drain 15 mL

•Call MD /PA / NP for the following:

1) **MAP is < 80 mmHg**
2) **Spinal Cord Perfusion Pressure (SCPP) < 65 mmHg**
3) Change in LOC or Mental Status
4) Headache / nausea
5) Numbness or change of sensation in lower extremities
6) Weakness in lower extremities
5) Change in vital signs

1) **NEVER LEAVE PATIENT UNATTENDED WHEN OPEN TO DRAIN**
2) **NEVER CONNECT A PRESSURE BAG or FLUSH SYSTEM**
3) **Never "backcock" the system Do Not transduce & drain simultaneously (may lead to accidental over drainage)**
4) Do not use Orange Swabcaps ® on Lumbar Drain

Fedorow, C., Moon, M., Mutch, W.,and Grocott, H., (2010) Lumbar Cerebrospinal Fluid Drainage for Thoracoabdominal Aortic Surgery: Rational and Practical Considerations for Management. Anesthesia-Analgesia, July 2010 • Volume 111 • Number 1

Makic, M.B. and Weigand, D.L., (2011) Lumbar Subarachnoid Catheter Insertion for Cerebrospinal Fluid Drainage and Pressure Monitoring. In AACN Procedure Manual for Critical Care, 6th Edition. ElSevier –Saunders St. Louis MO.

Approved by Dr Najam May 3rd, 2011

2011swelch