Guidelines for management of CSF drain in CVICU (Nursing responsibilities)

1. **Upon arrival to CVICU**
   - **Obtain sign out from attending anesthesiologist**
   - **Inspect the site of catheter placement.**
   - **Zero the transducer at the level of Right Atrium. Do not connect saline flush or pressure bag to transducer**
   - **Check for drainage/flow of CSF.**

2. **Keep the HOB < 15-20° at all times till CSF drain is in place.**

3. **Monitor CSF pressure continuously.**

4. **Standard neuro Checks every 1 hour including**
   - **If patient is unresponsive/sedated :**
     - **Check for deviation of eye medially (6th Nerve Palsy).**
     - **Deep tendon reflexes.**
   - **If patient is responsive:**
     - **Motor strength in extremities.**
     - **Check for deviation of eye medially (6th Nerve Palsy).**

5. **Examine the catheter and its insertion site every 4 hours and at every changeover.**

6. **Drain CSF to keep CSF pressure <= 10 mm of Hg up to 15 ml/ hr in aliquots of 5 ml while checking CSF pressure in between.**

7. **Hold anticoagulation until further orders.**

8. **Keep Mean Arterial Pressure (MAP) >= 70 mm of Hg.**

9. **Call CV surgical PA/MLP if:**
   - **CSF pressure > 15 mm Hg and drainage of 15 ml or above has been achieved for that hour.**
   - **CSF drainage stops and/or CSF pressure > 15 mm Hg.**
   - **CSF drainage is blood tinged or frank blood is seen.**
   - **Loss of CSF waveform**

10. **Call CV surgeon/Anesthesiologist on call if there is sudden change in neurological status or if the PA/MLP cannot troubleshoot the problem.**

11. **CT scan of head, neck and whole spine if patient continues to fail neuro checks as per the order protocol. CSF drainage and monitoring should be off during transport**

12. After 36 hours:

- **Check PT/INR, aPTT and platelet counts**
- **Call attending anesthesiologist after consultation with CV surgeon for removal of CSF drain after the Lab results are available.**
- **Patient remains flat for 1 hour post removal of CSF drain.**
- **Save catheter tip till MD asks to dispose**