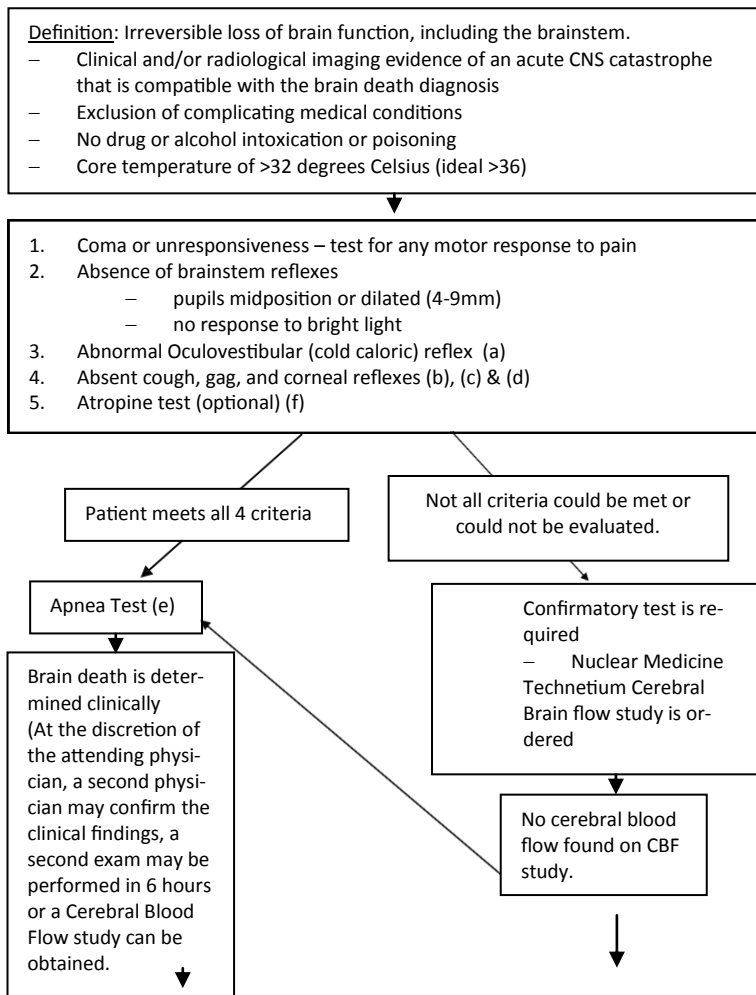


Determining Brain Death



Determining Brain Death Cont..

Document results of brain death on WVUH certification of brain death form. Pt. is considered dead at this time.

Notify family of medical team conclusions. Allow a brief but reasonable time for grieving & spiritual Notify CORE. Additional test may be recommended.

If patient is not an organ donor, extubate patient and allow for cardiac arrest
Call ME if appropriate.

Determination of Brain Death and subsequent extubation should occur within 24 hours.

Oculo-vestibular Reflex (cold caloric) (a):

1. Place patient in a 30-degree head-up position. This can be done by raising the head of the bed, or placing the entire bed in a 30-degree Reverse-Trendelenburg position.
2. Mix 200 cc tap water in ice. Place a kidney basin below the ear. Have an assistant open both eyelids.
3. Examine both external auditory canals. Clear away cerumen.
4. Using a Toomey syringe, slowly inject 50 cc into the external auditory canal on one side. Observe over 5 minutes for conjugate tonic eye movement towards the side of the stimulus. Repeat 50 cc in the same EAC.
5. After a rest period of 5 minutes, repeat the entire procedure in the other ear canal.
6. If in both cases there is no deviation of the eyes towards the stimulus side, the test is considered abnormal and may be consistent with brainstem death.

Gag and cough reflexes (b) & (c):

1. Insert an ETT suction catheter all the way into the ETT, suction, move the catheter side to side as it is withdrawn, and observe for cough, head movement, or facial expression change.
2. Wiggle the ETT. Observe for a gag reflex. Insert a Yankauer suction into the oropharynx and wiggle back and forth. Observe for any gag, head movement, or facial expression change.
3. No response to either or both tests may be consistent with brainstem death.

Determining Brain Death Cont..

Corneal Reflex (d):

1. With a tissue, CTA or gauze, touch the cornea over the iris of the eye. Observe for any eyelid reflex or motion, any eye movement.
2. Repeat on the contralateral eye.
3. If there is no motion or reflex, the test may be consistent with brainstem death.

Apnea Test (e): Patient must have an acceptable hemodynamic status when performing this test. In a COPD patient, consider alternative tests. This test requires high-level physician supervision.

1. Pre-oxygenate the patient for 10 minutes with FIO₂=1.0
2. Adjust ventilator so PaCO₂ is 35-45. Confirm with EtCO₂ or ABG # 1
3. Disconnect the ventilator. Apply 10 L/min O₂ aerosol T-piece to the end of the ETT.
4. Allow a maximum of 10 minutes. Observe for any chest wall motion. Obtain ABG # 2. If there are any spontaneous breaths, stop the test. If SaO₂ drops below 92%, stop the test & reconnect the ventilator. If there is clinically significant hypotension, stop the test & reconnect the ventilator.
5. If the PaCO₂ on ABG # 2 is 60mm Hg or >, test is considered positive.
6. Test is considered positive for "absent hypercarbic respiratory drive" and is consistent with brain death.

Atropine Test (f): The patient's heart rate is measured. 2mg of Atropine IV is then given. If there is < 10 % or no increase in heart rate, this supports the diagnosis of brain death. Additional confirmatory tests are however required.