Date: / /

BRAIN Death:

:. Irreversible loss of
Cerebral functioning.

3 types:- cortical or cerebral death with intact brainste
- Brain stem death with intact cerebrum.
- Whole brain death.

(1.) Cortical / cerebral Death:

:- cortex dead but,
Brain stem functioning

Causes:- cerebral hypoxia.
Wide spread cortical damage
toxic condition.

Clinical Feature.

:- deep coma.
- loss of power of perception but,
- Spontaneous respiration and circulation

This is called - vegetative life / persistent vegetative stati

m/c cause :- Traumatic diffuse axonal injury.

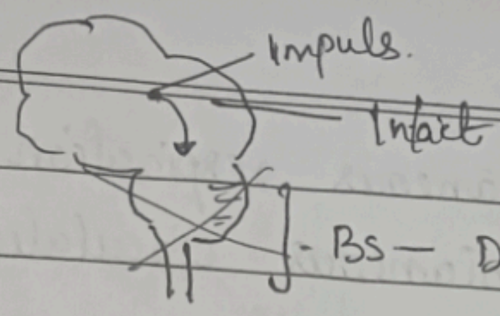
- Brain shows :- gliosis.
tissue resorption
dystrophic axons.
endothelial hypertrophy.

Complication :- Aspiration pneumonia
bed sores.
Sepsis.
UTI.
muscular atrophy
DVT, pulmonary thromboembolism

(2)

Date: / /

② **Brain stem death:**



BS – dead:
cerebrum intact
impulse from it are cut off by the brainstem

Brainstem :- vital centre for respiration :- Spontaneous stop of resp
circulation cannot be maintained

patient - unconscious :→ ∵ ascending reticular activating system.
located at the base/floor of aqueduct
is damaged.

causes :- BS injury
cerebral edema.
↑ed intracranial pressure.

⑧ **Whole brain stem death.**

- both :- cortex & BS - function stop irreversibly.
- there well be aseptic necrosis & softening of brain

Pan necrosis → 3-5 days :- widespread brain destruction d/t lack of perfusion.

respirator brain :→ brain well be softened.
↳ it looks - grey, dusky, soft, Near liquid

to Differentiate b/w :- brain as persistent vegetative state → it has perfusion maintain

HARVARD'S CRITERIA: (1968) Ad. Hoc committee of Harvard Medical Sch.

The ventilator is switch is offed for 10 min
↓
look for following response:

① Spontaneous respiration (Apnoea test).
② Spontaneous circulation.
③ pupillary reflex
④ corneal reflex.
⑤ Ocular reflex:
- Oculocephalic reflex :- doll's eye phenomen eye is fixed do not mov. when position of head is changed.
- Oculovestibular reflex :- few drops of cold H2O (caloric test). add on ear ↓ eye movment

⑥ Grimace reflex :- response to deep pressure on nail bed. supra orbital ridges/ mandebular joint
⑦ Gag reflex :- :- Stimulation of the posterior pharynx c tongue blade.
⑧ flat EEG.

response absent
↓
agais on ventilater.
↓
after 6hrs propedure is reperted (4 time) in 24hr.

Apnoea test :- before looking for resp.
- 100% O2 → gives via ventilator for 10 mins
- 5% CO_2 in O_2 for 5 min — prevent hypoxic brain damage

⑨ :- hypothermea
metabolic disered.
Coma d/t drugs.
Alcohol intoxicate
Relaxant
Hypovolemic Shock
- befor doing Apnoea test Coma d/t following should be excluded.

Organ transplantation Act :- 2012

Death certifying team should consist of :→

1. Doctor in charge of hospital
2. Doctor tx the patient
3. Neurologist.
4. Independent RMP

time :-

Liver & lung ⊂ in 15min.

kidney → 45min

heart → 1hr.

Cornea → 2hr

Skin & blood vessel → 2-4hr

Bone - 6hr.