

CENTRAL NERVOUS SYSTEM

NORMAL VALUES

ICP - 5 - 15 mmHg

Normal CSF pressure - 50 to 175 mmH₂O

Normal volume - 125 to 150 ml

CSF (Cerebro Spinal Fluid)

Glucose - 45 - 75 mg/dl

Protein - 15 - 45 mg/dl

WBC - 0 - 8 /mm³

GCS (Glasgow comascale)

Maximum score - 15

Minimum score - 3

CLINICAL POINTS

GCS lower than 8 indicates coma

CSF protein, WBC and pressure increased in meningitis but CSF glucose is decreased.

CSF glucose normal, but slight increase in CSF protein and WBC level indicate encephalitis

CSF protein normal, but low or absent CSF glucose and increased WBC level indicate brain abscess

THERAPEUTIC DIET

High fluid diet after contrast based study

CVA or stroke - High calorie, High protein soft diet

Clinical point - Avoid full liquid diet initially for CVA patient as increase the risk of aspiration

Increased ICP - Fluid restriction to 1200 ml/day

Aneurysm - Bland diet (Soft nonirritable diet) because irritable food increase BP and may precipitate into aneurysm rupture

Multiple sclerosis - Low fat, high fiber foods and foods high in potassium

Clinical point - High fiber diet is prescribed for immobilized patient in order to avoid constipation

THERAPEUTIC POSITION

Increased ICP - Semifowler's position

LP - 'C' Shaped position or lateral knee chest position

After LP - Prone position for one hour

After infratentorial surgery - Flat position (because elevated position causes herniation of supratentorial tissue)

After supratentorial surgery - Semifowler's position

Autonomic dysreflexia - High fowler's position

TEST

Halo's test - In the case of rhinorrhoea, after head injury. Collect it in a sterile pad. Then red spot with yellow ring around it indicate halo's. That reflects presence of CSF

Rhinorrhoea after head injury should be intimated to physician

Tensilon test - Myasthenia gravis

THERAPEUTIC RANGE

Phenytoin (Dilantin) - 10 - 20 mcg/ml

PREVIOUS QUESTIONS

1. Scale used to assess LOC (ESI - HYDRABAD)

- a) GCS
- b) Visual Analogue
- c) APGAR
- d) Braden Scale

Answer-a

2. Flexion posture that indicates severe impairment of cerebral functioning is (PROMETRIC)

- a) Decerebrate
- b) Decorticate
- c) Opisthotonus
- d) Trendelenberg

Answer-b

3. Point of lumbar puncture (Spinal tap) is (PSC)

- a) L1 - L2
- b) L3 - L4
- c) L5 - L6
- d) T11 - T12

Answer-b

4. The diagnostic test used to assess the electrical activity of the brain is (ESI - KOLLAM)

- a) ECG
- b) EMG
- c) EEG
- d) ECT

Answer-c

5. Which of the following activity should be encouraged after a contrast based CT scan? (NIT GOA)

- a) Ambulation
- b) Drinking fluids
- c) Turning
- d) Coughing and deep breathing

Answer-b

Because contrast should be out.

6. Post lumbar puncture headache is managed by advocating

- a) Prone position
- b) Analgesics
- c) Hydration
- d) All the above

Answer-d

Headache is due to CSF leakage through the puncture site.

7. Caloric test is performed to assess (NIMHANS)

- a) Protein energy malnutrition
- b) Olfactory function
- c) Auditory nerve function
- d) None of these

Answer-c

Caloric stimulation is done to check acoustic nerve.

In caloric test, putting cold or warm water to ear to assess the nystagmus. Normal reaction, apply pneumonics COWS. Cold causes opposite side nystagmus and warm water shows same side nystagmus.

Absence or reverse pattern reflect abnormal function

8. Spinal cord ends at (HCL, ESI - DELHI)

- a) T12
- b) L1
- c) L5
- d) S1

Answer-b

9. Myasthenia Gravis is diagnosed by (AIIMS)

- a) Rothera's test
- b) Tensilon test
- c) Edrophonium hydrochloride test
- d) Both b & c

Answer-d

Edrophonium hydrochloride is the chemical name of tensilon test.

10. A bruise over the mastoid process in skull fracture is (AIIMS, NIMHANS)

- a) Spalding sign
- b) Battle sign
- c) Homan sign
- d) Cullen's sign

Answer-b

11. Which of the following history is most relevant regarding a contrast based CT? (HAAD, SCTIMST)

- a) h/o previous diagnostic CT
- b) h/o recent X-ray
- c) h/o allergy to seafoods
- d) h/o previous surgery

Answer-c

Allergy to seafood indicate allergy to iodine. Contrast is an iodine based dye.

12. Which of the following investigation to be done before a contrast based CT? (PSC)

- a) RFT
- b) LFT
- c) CBC
- d) EEG

Answer-a

Because contrast should be eliminated out through the renal system.

13. Which of the following drugs to be withheld before a contrast based procedure? (DHA)

- a) Paracetamol
- b) Aspirin
- c) Metformin
- d) Eptoin

Answer-c

Metformin + contrast = liver toxicity

14. Which of the following monitoring is most significant after

a contrast based procedure? (ACTREC)

- a) BP
- b) PR
- c) RR
- d) Urine output

■ **Answer-d**

Urine output reflects whether contrast has gone or not

15. What is the absolute contra-indication of MRI? (HSSC)

- a) Increased ICP
- b) Temporal lobe epilepsy
- c) Infratentorial tumor
- d) SDH

■ **Answer- b**

Electrodes are placed over the temporal bone. That may stimulate nerves and precipitate into seizure.

16. Which of the following diagnosis is possible only with MRI? (CUK)

- a) Posterior fossa tumor
- b) SDH
- c) EDH
- d) ICH

■ **Answer-a**

Posterior fossa tumor, deep tissue injuries and infratentorial tumors are clearly diagnosed with MRI compared to CT scan.

17. What is the most modern type of angiography? (SHS - BIHAR)

- a) Coronary angiography
- b) Cerebral angiography
- c) Cadiac catheterization
- d) Digital subtraction angiography

■ **Answer-d**

18. Which of the following procedure to be done along with Lumbar puncture? (PROMETRIC)

- a) RFT
- b) LFT
- c) GRBS
- d) Biopsy

■ **Answer- c**

Because $GRBS \times \frac{2}{3} =$ Approximate glucose level of CSF. Eg:- If GRBS during LP is $123 \times \frac{2}{3} = 41 \times 2 = 82$ mg/dl

19. If GRBS is 120mg/dl. What is the expected CSF glucose level? (DHA)

- a) 60mg/dl
- b) 70mg/dl
- c) 80mg/dl
- d) 90mg/dl

■ **Answer-c** $120 \times \frac{2}{3} = 80$ mg/dl

20. Cob-web appearance of CSF indicate (AIIMS)

- a) Bacterial meningitis
- b) Viral meningitis
- c) TB meningitis
- d) Encephalitis

■ **Answer-c**

CSF colour	Diagnosis
■ Clear	Normal/viral meningitis
■ Turbid	Bacterial meningitis
■ Dark red	Subarachnoid haemorrhage
■ Bright red	Traumatic LP
■ Cob-web appearance	TB meningitis

21. Which of the following instruction to be given before an EEG (JIPMER)

- a) NPO for 3hrs

- b) Can have clear fluids only
- c) Can have breakfast
- d) Use stimulants

■ **Answer-c**

Pt can have breakfast, otherwise hypoglycemia causes abnormal waves in EEG.

22. X'ray examination of spinal cord is termed as (RAILWAY BANGLORE)

- a) Myography
- b) Spinography
- c) Discography
- d) Myelography

■ **Answer-d**

23. Which of the following reflex is considered as normal in infant? (PROMETRIC)

- a) Finger flexion reflex
- b) Babinski reflex
- c) Decorticate reflex
- d) Decerebrate reflex

■ **Answer- b**

■ Decorticate reflex - Client flexes one or both arms on the chest and may extend the legs stiffly Indicates nonfunctioning of cortex

■ Decerebrate posturing - Client stiffly extends one or both arms and possibly the legs indicate brainstem lesion

■ Babinski's reflex-Dorsiflexion of the ankle and great toe, with fanning of other toes Indicates a disruption of the pyramidal tract. But it is a normal finding incase of infant.

24. Most important indicator in GCS (Glassgow Coma Scale) (MSc ENTRANCE RAK, SCTIMST)

- a) Eye response
- b) Verbal response
- c) Motor response
- d) Pupil response

■ **Answer-a**

25. 'X' ray study of spinal subarachnoid space is termed as (RPSC)

- a) SPECT
- b) PET
- c) Cerebral angiography
- d) Myelography

■ **Answer-d**

26. Which one of the following is the first drug of choice of status epilepticus (JIPMER, SCTIMST)

- a) Phenytoin
- b) Phenobarbitone
- c) Lorazepam
- d) Carbamazepine

■ **Answer-c**

27. Which of the following is an example of osmotic diuretics? (ESI - DELHI)

- a) Lasix
- b) Spirinolactone
- c) Mannitol
- d) Aldactone

■ **Answer-c**

28. "Strict oral hygiene" is instructed to those on (PROMETRIC)

- a) Phenytoin
- b) Carbamazepine
- c) Sodium valproate
- d) Metformin

■ **Answer- a**

Because side effect of phenytoin is gingival hyperplasia.

29. What is the therapeutic range of phenytoin? (HAAD, DHA)

- a. 1.2 to 2mcg/ml
- b. 5-10mcg/ml
- c. 10-20mcg/ml
- d. 20-30mcg/ml

■ **Answer-c**

30. Which of the following drug is used for tensilon test? (PROMETRIC)

- a. Atropine
- b. Physostigmine
- c. Edrophonium hydrochloride
- d. Bromocriptine

■ **Answer-c**

31. Which of the following group of drugs to be withheld if he or she shows classical signs Parkinson's disease? (IIT - CHENNAI)

- a. Mood stabilizers
- b. MAO inhibitors
- c. Antipsychotics
- d. Antiepilepticus

■ **Answer-c**

Antipsychotics generally reduce the dopamine level.

32. Which of the following is a drug of choice of Parkinson's disease? (RCC)

- a. Amandidine
- b. Bromocriptine
- c. Levodopa
- d. All of the above

■ **Answer-d**

33. Which of the following investigation to be done routinely for a patient, using carbamazepine? (PROMETRIC)

- a. CBC
- b. RFT
- c. TFT
- d. S.E

■ **Answer-a**

Carbamazepine causes blood dyscrasias so count should be monitored.

34. Which of the following vitamin should be restricted for a patient on levodopa? (PROMETRIC)

- a. Vit A
- b. Vit B1
- c. Vit B6
- d. Vit B9

■ **Answer-c**

Vit B6 and high protien diet impedes the absorption and metabolism of dopamine

35. Which of the following drug kept ready during tensilon test? (NIMHANS)

- a. Atropine
- b. Physostigmine
- c. Dopamine
- d. Hydrocortisone

■ **Answer- a**

Some times tensilon causes bradycardia as a result of increased ACH level. So atropine should be kept ready.

36. Which of the following medication has to be avoided for a patient taking antiparkinson drugs? (JIPMER)

- a) Bromocriptine
- b) Anticholenergics
- c) MAO inhibitors
- d) COMT inhibitors

■ **Answer-c**

▶ Antiparkinson medications + MAO inhibitors = hypertensive crisis

37. Involuntary movement of the Eyes (RAILWAY CHENNAI)

- a. Anisocoria
- b. Nystagmus
- c. Strabismus
- d. Raccoons Eye

■ Answer-b

38. Difficulty in Speaking is (PSC, ESI KOLLAM)

- a. Dysphagia
- b. Dyslexia
- c. Dysarthria
- d. Dyskinesia

■ Answer-c

39. Which of the following is not

a manifestation of increased ICP (CHANDIGARH - MCH, NIMHANS)

- a. Constriction of pupil
- b. Papilledema
- c. Cushing's triad
- d. Altered level of consciousness

■ Answer-a

40. Diabetes insipidus occurs as a result of (ESI HYDRABAD)

- a. Increased ADH
- b. Decreased insulin
- c. Decreased ADH
- d. Increased insulin

■ Answer-c

41. Surgical removal of pituitary gland is known as

- a. Encephalotomy
- b. Hypophysectomy

- c. Laminectomy
- d. Sequestrectomy

■ Answer-b

42. Which of the following is not a sign of meningeal irritation? (AIIMS)

- a. Nuchal rigidity
- b. Kerning's sign
- c. Brudzinski's sign
- d. Chvostek sign

■ Answer-d

Chvostek sign is the sign of tetany

43. The position suited for Unconscious patient is (JIPMER)

- a. Fowler's position
- b. Prone position
- c. Supine position
- d. Semi-prone position

■ Answer-d

44. The pituitary hormone that stimulate the ejection of Milk is (PGIMER)

- a. Prolactin
- b. Vasopressin
- c. Oxytocin
- d. Progesterone

Answer-c

45. Phrenic Nerve originates from

- a. T1
- b. C4
- c. C1
- d. C7

Answer-b

46. Approximate amount of blood received by brain per minute is (SCTIMST)

- a. 750-900ml/mt
- b. 5L/mt

- c. 70ml/mt
- d. None of these

Answer-a

47. A state in which client shows continuous seizures in rapid succession without regaining consciousness for atleast 30 minutes (RCC)

- a. Status epilepticus
- b. Status asthmaticus
- c. Grand mal seizure
- d. Petitmal seizure

Answer-a

48. Which of the following indicates persistence of spinal shock after spinal cord injury (NIMHANS)

- a. Hyper reflexia
- b. Positive reflexes

- c. Reflex emptying of bladder
- d. Inability to elicit babinski's reflex

Answer-d Areflexia is the sign of spinal shock

49. Normal CSF production per day (MALABAR CANCER CENTRE)

- a. 500ml/day
- b. 1500ml/day
- c. 2000-2500ml/day
- d. 500-1500ml/day

Answer-a

50. Chronic irritation of 5th cranial nerve is (BARC)

- a. Facial palsy
- b. Acoustic neuroma
- c. Trigeminal neuralgia
- d. Bell's palsy

Answer-c

■ PREPARED BY PRADEEP S

■ 9562929930,9633408682

■ www.zodiacnurses.com

■ ZODIAC INSTITUTE OF HEALTH SCIENCE

■ www.nursestonutshell.com