

# NEUROSURGERY

Mini-OSCE and Final



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# Syllabus

- Brain Tumors
- Spine Tumor
- Head trauma
- SAH
- ICP
- Hydrocephalus
- Spinal Trauma
- Spinal Degenerative disease
- CNS Anomalies
- Spinal Anomalies

# Brain Tumor

## Q1) (A -->D)

A) Which factor favors to be abscess rather than tumor ?

- 1) age
- 2) renal dialysis
- 3) radiation
- 4) family history

Answer:

B) Which of the following give irregular ring enhancement on CT ?

- 1) mets
- 2) glioblastoma
- 3) abscess

Answer:

C) Most common presenting symptoms in patients with glioblastoma ?

- 1) headache
- 2) seizure
- 3) hemiparesis
- 4) all of the following

Answer:

D) All symptoms occur in meningioma except?

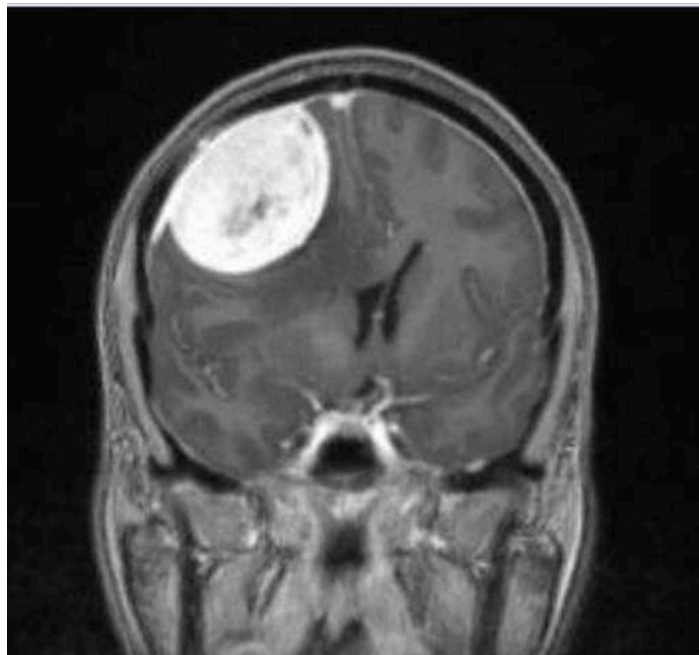
- 1) hormonal disturbances
- 2) headache
- 3) sleep disorder
- 4) anosmia

Answer:

## Q2) (1--->4)

1. Which of the following is TRUE regarding this tumor?

- A) Rapidly growing tumor
- B) Slow growing
- C) Arises from oligodendrocytes
- D) Commonly metastatic



Answer: B

# Brain Tumor

2. Which radiological sign is most characteristic?

- A) Ring enhancement
- B) Dural tail sign
- C) Butterfly lesion
- D) Calcified pineal mass

Answer: B

3. What is the best method for grading tumors?

- A) CT scan
- B) MRI
- C) Surgical biopsy/Histopathology
- D) PET scan

Answer: C

4. Which histological finding is typical of this tumor?

- A) Rosenthal fibers
- B) Psammoma bodies
- C) Reed–Sternberg cells
- D) Homer-Wright rosettes

Answer: B

**Q3) (1---3) / 4th question removed from exam.**

1. According to the WHO classification, what is the grade of this tumor?

- A) WHO grade I
- B) WHO grade II
- C) WHO grade III
- D) WHO grade IV

Answer: A

2. Which histopathological finding is most characteristic of this tumor?

- A) Rosenthal fibers
- B) Psammoma bodies
- C) Homer Wright rosettes
- D) Reed-Sternberg cells

Answer: A

3. What is the best method for grading?

- A) CT brain
- B) MRI brain with contrast
- C) Surgical biopsy and histopathology
- D) CSF cytology

Answer: C



# Brain Tumor

## Q4 (1---6)

1)The earliest and most common symptoms of vestibular shwannoma?

- A)Vertigo
- B)Sensoroneral hearing loss and tinnitus
- C)mass effect

Ans:B

2)The most sensitive modality of imaging for diagnosis of shwannoma?

- A)CT with contrast
- B)MRI with gadolinium
- C)Skull X-ray
- D)Brainstem auditory evoked response

Ans:B

3)all are treatment modalities for vestibular shwannoma except?

- A)microsurgical excision
- B>Sterotactic Radiotherapy
- C)Chemotherapy
- D)Observation for asymptomatic small tumor

Ans:C

4)Vestibular shwannoma associated with which condition?

- A)NF1
- B)NF2
- C)Tuberous sclerosis
- D)VHL

Ans:B

5)55 years old man with frontal mass and new onset seizure,histopathology revealed atypical astrocyte with necrosis ,what is your diagnosis?

- A)oligodendroglimoa
- B)glioblastoma
- C)low grade astrocytoma
- D)Ependyoma

Ans;B

6)Most common posterior fossa child tumor arise from?

- A)cerebellar hemispheres
- B)floor of 4th ventricle
- C)cerebellar vermis
- D)Brain stem

Ans:C

# Brain Tumor

## Q5 (1----3):

1) Which factor favor to be abscess rather than brain tumor?

- A)age
- B)renal dialysis
- C)radiation
- D)family history

Answer:B

2)Which of the following condition assoiated with pineloma?

- A)Paiunad's syndrome
- B)Truncal ataxia

Answer: A

3) Which histological finding is typical finding in Meningiomas?

- A) Rosenthal fibers
- B) Psammoma bodies
- C) Reed–Sternberg cells
- D) Homer-Wright rosettes

Answer: B

## Q6 (1----5)

1) Most common primary brain tumor in adults:

- A)glioblastoma
- B)meningioma
- C)Ependymoma

Answer: B

2) Child with NF1 what brain tumor he most likley whould have:

- A)optic pathway glioma
- B)medulloblastoma
- C)Ependymoam
- D)ATRT

Answer:

3) Regarding vestibular shwanoma which of the following is not a classic strategy of treatment:

- A)high intensity chemotherapy
- B) microsurgical resection
- C)sterotactic radiotherapy
- D)observation with serial MRI

Answer: A

# Brain Tumor

4) What is the symptom which come with medulloblastoma:

- A) Ataxia and gait imbalance
- B) visual loss
- C) headache
- D) seizure

Answer: A

5) Which of the following considered major risk factor of meningioma:

- A) brain radiation
- B) smoking
- C) hypertension
- D) hyperlipidemia

Answer: A

## Q7 (1---4)

1. All of the following intracranial tumors are known to cause drop metastases EXCEPT:

- A. Medulloblastoma
- B. Glioma
- C. Astrocytoma
- D. Ependymoma
- E. Hemangioblastoma

Answer: E

2. Which of the following histopathological features is most commonly seen in meningioma?

- A. Rosette formation
- B. Psammoma bodies
- C. Necrosis
- D. Pseudopalisading
- E. Schiller-Duval bodies

Answer: B

3. The best treatment strategy for most brain tumors is:

- A. Radiotherapy alone
- B. Chemotherapy alone
- C. Surgery with maximal safety
- D. Surgery with wide safety margin
- E. Observation only

Answer: C

4. Hemangioblastoma is most commonly associated with which genetic disorder?

- A. Neurofibromatosis type 1
- B. Neurofibromatosis type 2
- C. Tuberous sclerosis
- D. Von Hippel-Lindau disease
- E. Li-Fraumeni syndrome

Answer: D

# Brain Tumor

## Q8 (1--4)

1) Child come with this CT finding , all of the following clinical presentation of pineloma except:

- A. Headche
- B. Skin rash
- C. Upward gaze

Ans : B

2) Which of the following hormones secreted by this gland?

- A. Cortisol
- B. Melatonin
- C. HCG

Ans: B

3) All of the following is part of parinaud's syndrome except:

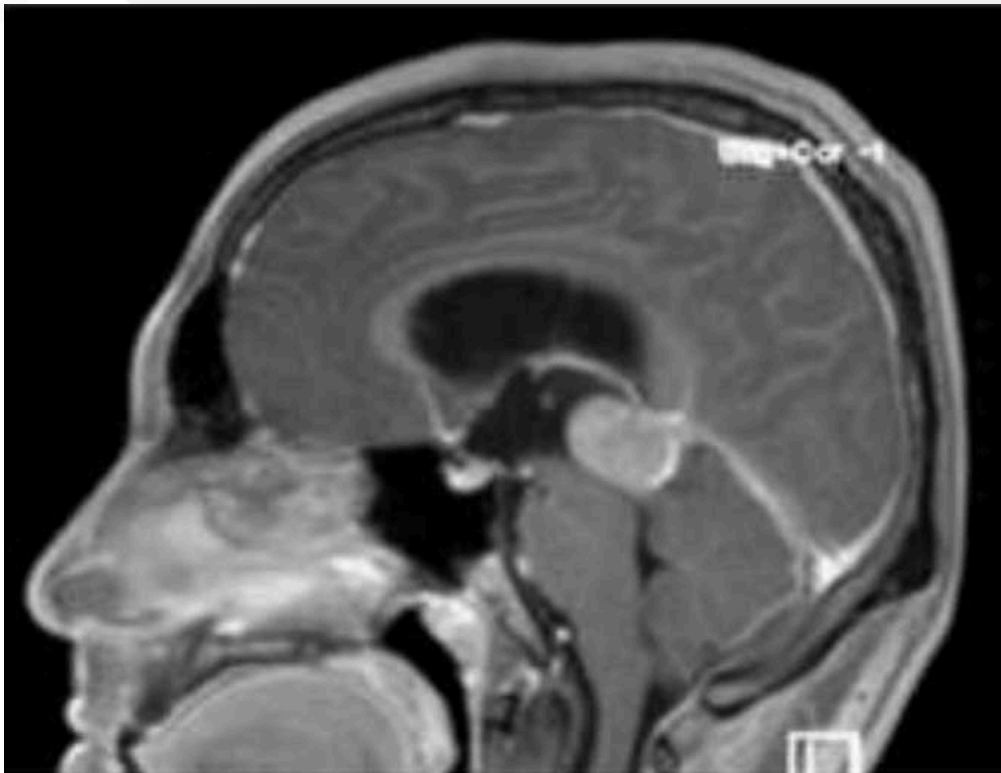
- A. Upward gaze
- B.convergenace and retraction
- C. Hemianopia
- D. Pseudo-Argyl Robertson pupil

Ans: C

4) Which of the following condition associated with pineloma:

- A. Paiunad's syndrome
- B. Turcket syndrome
- C. Truncal ataxia

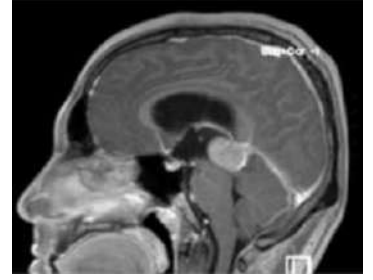
Ans : A



# Brain Tumor

Q8: Child come with this CT finding , all of the following clinical presentation of pineloma except:

- A. Headche
- B. Skin rash
- C. Upward gaze



**Ans : B**

Q9) Which of the following is the most common type of functional pituitary adenoma?

- a. Lactotroph
- b. Gonadotroph
- c. Somatotroph
- d. Corticotroph
- e. Thyrotroph

**Answer: a**

Q10) What is the main histopathological difference between low-grade astrocytoma and glioblastoma multiforme (GBM)?

- a. Presence of necrosis in glioblastoma
- b. Presence of necrosis in astrocytoma
- c. Absence of necrosis in glioblastoma
- d. Both tumors show central necrosis
- e. Necrosis is more common in low-grade astrocytoma

**Answer: a**

Q11) What is the most common primary malignant brain tumor in adults?

- a. Glioblastoma
- b. Astrocytoma
- c. Oligodendroglioma
- d. Medulloblastoma
- e. Meningioma

**Answer: a**

Q12) All of the following tumors are associated with Neurofibromatosis Type 2 (NF2) except:

- a. Schwannoma
- b. Meningioma
- c. Ependymoma
- d. Neurofibroma
- e. Vestibular schwannoma

**Answer: d**

# Brain Tumor

Q13) Which tumor is characterized by “Homer wright rosettes ” histology ?

- a. Medulloblastoma
- b. Ependymoma
- c. Pilocytic astrocytoma
- d. Oligodendroglioma
- e. Meningioma

Answer: a

Q14) All of the following statements are true except:

- a. Astrocytoma is the most common primary brain tumor in adults
- b. Glioblastoma is a high-grade astrocytoma
- c. Pilocytic astrocytoma is common in children
- d. Oligodendroglioma typically presents with seizures
- e. Medulloblastoma is common in adults

Answer: E

Q15) What is the most common presenting symptom of vestibular schwannoma (acoustic neuroma)?

- a. Headache
- b. Hearing loss / diminished hearing
- c. Vertigo
- d. Nausea and vomiting

Answer: b

Q16) All of the following could be present with pinealoma except:

- a. Precocious puberty
- b. Obstructive hydrocephalus
- c. Parinaud syndrome
- d. Headache
- e. Skin rash

Answer: e

Q17) Which of the following is considered a good prognostic factor in pediatric brain tumors?

- a. Gross total tumor resection
- b. Low mitotic index (low proliferative activity)
- c. Absence of metastasis at diagnosis
- d. All of the above

Answer: d

Q18) Which of the following is a good prognostic factor in adult brain tumors?

- a. Tumor can be completely removed by surgery
- b. Tumor grows slowly
- c. Young age
- d. All of the above

Answer: d

# Brain Tumor

Q19) All of the following are required investigations for hemangioblastoma except:

- a. Spinal CT
- b. Brain CT
- c. CBC
- d. Spinal MRI
- e. Brain MRI

Answer: a

Q20) One of these is extra axial:

- A. Meningioma
- B. Astrocytoma
- C. Glioblastoma
- D. Ependymoma

Answer: a

Q21) Drop mets in:

- A. Meningioma
- B. Astrocytoma
- C. Medulloblastoma
- D. Pituitary adenoma

Answer: c

Q22) VHL disease associated with :

- A. Pinealoma
- B. NF1
- C. Hemangioblastoma
- D. NF2

Answer: c

Q23) MC PRIMARY ADULTHOOD TUMOR :

- A. Meningioma
- B. glioblastoma multiforme
- C. Pilocytic astrocytoma
- D. Schwannoma

Answer: a

Q24) What is the most common spinal tumor?

- a. Meningioma
- b. Schwannoma
- c. Ependymoma
- d. Astrocytoma
- e. Metastasis

Answer: E

# Brain Tumor

Q25) One of the following tumors shows high incidence of calcification? Select one:

- a. Pituitary adenoma
- b. Anaplastic astrocytoma
- c. Oligodendroglioma
- d. Ependymoma
- e. Medulloblastoma

Answer: c

Q26) Which of the following brain tumors has the best prognosis in general? Select one:

- a. Glioblastoma
- b. Ependymoma
- c. Astrocytoma
- d. Meningioma
- e. Medulloblastoma

Answer: d

Q27) Cranial meningiomas arise from? Select one:

- a. Dura
- b. Neuroblast
- c. Pia matter
- d. Periosteum
- e. Arachnoid cap cells

Answer: e

Q28) Which of the following brain tumors can disseminate through CSF (drop metastasis) to the spine? Select one:

- a. Oligodendroglioma
- b. Pilocytic Astrocytoma
- c. Diffuse astrocytoma
- d. Medulloblastoma
- e. Vestibular schwannoma

Answer: d

Q29) Surgery is usually not the primary treatment option in: Select one:

- a. Prolactinoma.
- b. Microadenoma with acromegaly.
- c. Nonfunctioning pituitary adenoma.
- d. Invasive pituitary adenoma.
- e. Microadenoma with Cushing.

Answer: a

Q30) Galactorrhea, Amenorrhea syndrome is most commonly caused by: Select one:

- a. Chromophobe adenoma.
- b. Prolactinoma.
- c. Chorionic Carcinoma.
- d. Basophil adenoma.
- e. Astrocytoma.

Answer: b

# Brain Tumor

Q) a case of child with astrocytoma :

A) what is the most common site of astrocytoma :

cerebellum

B) what is the Histo pathological finding:

Rosenthal fibres

C) what is the MRI FINDING :

solid and cystic component ( mural nodule )

D) what is the management :

surgery



Q....

1) All of these are features except?

Comes from glial cells

2) How to confirm grade?

Histopathology/biopsy



Q...

1-Histological:

pseudo palisading and central necrosis

2- treatment:

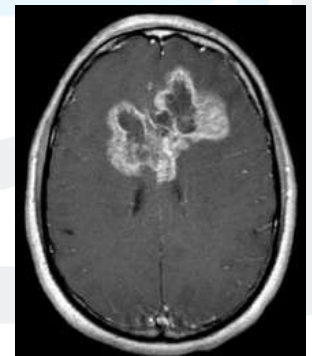
Surgical then chemotherapy then radiotherapy

3- symptoms:

headache/ seizures/ hemiparesis/ (all of the above)

4-One of the following will mostly be associated with abscess but not glioblastoma:

Renal disease/ dialysis



Q) A child with this radiograph:

1- diagnosis:

Pilocystic astrocytoma

2- Type of the lesion:

Cystic with mural nodule

3- What does this radiograph shows:

Obstructive (Non-communicating) hydrocephalus

4- If the patient's state was deteriorating, what is your management:

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# Brain Tumor

**Q1) One of these pituitary adenoma causes compressive macroadenoma ?**

Non functional pituitary adenoma

**Q2) All of the following considered vestibular schwannoma tx except?**

Chemotherapy

**Q3) which factor favors to be abscess rather brain tumor?**

Renal dialysis

**Q4) 60 old man with new onset seizure & ring enhancement?**

Glioblastoma (GBM)

**Q5) indicate highest grade glioma?**

rapid growth

**Q6) Butterfly glioblastoma cross?**

corpus callosum

**Q7) primary standard for grading brain tumour?**

surgical biopsy + histopathology

**Q8) Pinealoma associated with?**

parinaud syndrome

**Q9) parinaud syndrome all except?**

skin rash

**Q10) first surgical intervention for vestibular schwannoma?**

microsurgical resection

**Q11) All of the following states can undergo surgery except:**

Severe coagulopathy.

**Q12) Ependymoma, the correct statement:**

arise from ependymal cells present in ventricles and CNS

**Q13) The most common symptom in ependymoma is:**

Back pain

**Q14) All of the following may be seen with pinealoma except:**

Skin rash

**Q15) Which hormone is affected in pinealoma?**

Melatonin

**Q16) Which syndrome is associated with pinealoma?**

Parinaud syndrome

**Q17) Ependymoma is associated with:**

NF2

**Q18) Which tumor occurs in the ventricles and filum terminale?**

Ependymoma

**Q19) 60-year-old patient suddenly has seizures with enhancing lesion - most likely cause?**

Metastasis

**Q20) Main difference between low-grade astrocytoma and glioblastoma multiforme?**

Presence of central necrosis in glioblastoma

**Q21) Most common intra-axial tumor from glial cells with calcification?**

Oligodendroglioma

# Brain Tumor

Q22) All of the following tumors contain mural nodules in children except:

**Hemangioblastoma**

Q23) Best prognosis brain tumor in adult :

**Meningioma**

Q24) origin of Meningioma :

**Arachnoid cap cells**

Q25) drop-mets seen in :

**medulloblastoma**

Q26) Which of the following tumor shows high rate of calcification :

**oligodendroma**

Q27) Wrong statement regarding cranial tumor :

**Ependymoma more common than astrocytoma**

Q28) Tumor that arise from the roof of 4th ventricle ( medulloblastoma ) next step?

**spinal MRI with contrast**

Q29) Not ddx for ring enhancement mass?

**Meningioma**

Q30) Craniopharyngoma?

**Derived from remnants of Rathke pouch (ectoderm)**

Q31) 6 year old boy ,suprasellar calcified tumor?

**Craniopharyngoma**

Q32) Oligodendroglioma histologic appearance?

**Fried egg**

Q33) Polcythemia in?

**Hemangioblastoma**

Q34) Hemangioblastoma Associated with?

**von Hippel Lindau syndrome**

Q35) False about pituitary adenoma?

**First line management for prolactinoma is surgery**

Q36) Edema associated with brain tumor?

**Vasogenic**

Q37) Common site of meningiomas?

**Parasagittal**

Q38) Bilateral vestibular schwannoma?

**NF2**

Q39) Schwannomas , one is true ?

**Slow growing and benign**

# Spinal Tumor



3A) All of the following are true about ependymoma except ?

- 1) arise from ependymal cell of central cord and ventricle
- 2) Tumor exclusive on spinal cord
- 3) rarely affect children

ANS:A

3B) Most common presenting symptoms?

- 1) headache
- 2) pain (gradual onset of pain increases at night)
- 3) vomiting

ANS:B

3c) The definitive treatment for most spinal tumors is:

- A. Chemotherapy alone
- B. Radiotherapy alone
- C. Surgical excision
- D. Steroid therapy
- E. Observation

Answer: C. Surgical excision

3D) Spinal ependymoma associated with which syndrome ?

- 1) NF2
- 2) Turcot syndrome
- 3) Horner syndrome

ANS:A

) Most common presenting symptom in spinal tumours?

Answer: gradual onset of pain increases at night

. patient low back pain and move his foot from side to side in supine position:

A) according to MRI the diagnosis is : **met**s

B) muscle strength scale for the patient: **2**

C) level of the spinal vertebrae lesion : **T6 or T10** عليها اختلاف

D) all of the following are part of the management except : **lower limb X-ray**



1- Cells of this type of tumor:

**ependymal cells (?)**

2- Management:

**surgery (?)**

3- MC symptom with such tumor:

**back pain**

4. Ependymoma - the correct statement:

**From ependymal cells present in ventricles and CNS**



# Spinal Tumor

**Spinal ependymoma --**

arise from ependymal cell of central cord & ventricle

**15. most common symptom of spinal tumour--**

back pain

**MRI Dx ? Astrocytoma**

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**Hemangioblastoma is most commonly associated with which genetic disorder?**

1. Neurofibromatosis type 1
2. Neurofibromatosis type 2
3. Tuberous sclerosis
4. Von Hippel-Lindau disease
5. Li-Fraumeni syndrome

Answer: D. Von Hippel-Lindau disease

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**Ependymoma - the correct statement:**

From ependymal cells present in ventricles and CNS

**12. 60-year-old patient suddenly has seizures with enhancing lesion - most likely cause?:**

metastases

## Final

**One of the following spinal cord tumors is considered most likely to be found in intradural intramedullary location?**

Select one:

1. Ependymoma
2. Schwannoma
3. Meningioma
4. Metastasis
5. Osteoma

Ans:a

**7. All of the following tumors are associated with Neurofibromatosis Type 2 (NF2) except**

1. Schwannoma
2. Meningioma
3. Ependymoma
4. Neurofibroma
5. Vestibular schwannoma

Ans:d

# Spinal Tumor

## Final

Most common site for Mets in spinal cord :

Thoracic spine

2-Male patient has lower back pain, not associated with fever and night sweats, but he mentioned that he lose 12 kg of his weight in the last month, what is the best initial investigation:

Lumber MRI

11-Syringomyelia, most important thing to be ruled out?

Spinal tumor

15-Ependymoma most common location in Spinal cord?

Filum terminale(not sure)

6 - Which of the followings is wrong about spinal tumors?

Select one:

1. The commonest tumor is metastases
2. Meningiomas tend to be associated with neurofibromatosis type I
3. Ependymomas are more common than astrocytomas????? (Ependymoma most common in adults,Astrocytoma most common in children)
4. Schwannomas are more easily excised than neurofibromas
5. Most prostatic metastases occur in the lumbar spine

ans:b

10 - All of the following are intramedullary spinal tumors except?

Select one:

1. Plasmacytoma
2. Ependymoma
3. Astrocytoma
4. Hemangioblastoma
5. Lipoma

Ans:a

Not an Intramedullary tumor :

Shwanoma

Spinal tumor in which 99% cases are painless :

Henangioma

36. One is intra dural extra medullary : **neurofibroma**

Spinal tumor arising from denticulate ligament

Meningioma

# Spinal Tumor

## Final

What is the most common spinal tumor?

1. Meningioma
2. Schwannoma
3. Ependymoma
4. Astrocytoma
5. Metastasis

Ans:e



# Head Trauma

## Q1) answer (A----D)

A) According to these pictures, all of the following are true except?

- 1) cross suture
- 2) doesn't cross suture
- 3) crescent shape

Answer: 2

B) What is the line of management?

- 1) evacuation
- 2) observation
- 3) strip craniotomy

Answer: A

C) Typical appearance of acute extradural hematoma on non-contrast CT-scan of the head is? Select one:

- a. Hypodense appearance
- b. crescentic shape
- c. Hyperdense appearance
- e. Isodense appearance

Answer: C

D) Open eye to painful stimulus, display flexion to pain, incomprehensible sound, the GCS?

- 1) 7
- 2) 8
- 3) 6
- 4) need intubation

Answer: 2

## Q2) answer (1----4)

man is brought to the ER after a fall. On arrival: one eye opens spontaneously and the other doesn't respond to light (fixed). Produces inappropriate words. Localizes pain with motor response and this is his CT brain:

1. What is the patient's Glasgow Coma Scale (GCS)?

- A) 9
- B) 10
- C) 12
- D) Anisocoria

Answer: C

2. Which of the following is NOT a feature of this photo?

- A) Crescent-shaped on CT
- B) Crosses suture lines
- C) Crosses midline
- D) Can occur in elderly after minor trauma

Answer: C



# Head Trauma

3. What is the initial investigation in the emergency setting?

- A) MRI brain with contrast
- B) CT scan without contrast
- C) Lumbar puncture
- D) CT scan with contrast

Answer: B

4. What is the management of a large subdural hematoma with midline shift?

- A) Observation
- B) Mannitol only
- C) Surgical evacuation
- D) High-dose steroids

Answer: C

**Q3) answer 1+2**

1. Subdural differ from epidural in?

- A) Subdural from artery, epidural from vein
- B) Subdural can cross suture, epidural not
- C) Epidural crescent in shape, Subdural lens shape

Ans;B

2. clinical sequencing of Epidural hematoma?

- A) trauma, lucid interval, then deteriorating
- B) prolonged coma
- C) progressive weakness in limbs

Ans;A

**Q4) answer 1+2:**

1. In a patient with suspected subarachnoid hemorrhage (SAH), what is the characteristic finding on a non-contrast CT scan?

- A) Hypodense area in the parietal lobe
- B) Hyperintense area in the basal cisterns
- C) Ring-enhancing lesion in the frontal lobe
- D) Isointense lesion in the ventricles

Answer: B

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2. All of the following statements about post traumatic cerebral edema are true, EXCEPT:

- A) Vasogenic and cytotoxic edema may occur together
- B) Vasogenic edema responds well to corticosteroid therapy
- C) Cytotoxic edema results from blood-brain barrier disruption
- D) Cytotoxic edema is due to neuronal and glial cell membrane injury

Answer: C

# Head Trauma

**Q5) Which of the following findings is characteristic of an Upper Motor Neuron (UMN) lesion?**

- A) Hypotonia, hyporeflexia, muscle fasciculations, negative Babinski sign
- B) Hypertonia, hyperreflexia, no muscle fasciculations, positive Babinski sign
- C) Hypotonia, hyperreflexia, muscle fasciculations, positive Babinski sign
- D) Hypertonia, hyporeflexia, muscle fasciculations, negative Babinski sign

Answer: B

**Q6) Which of the following is an indication of surgical evacuation in acute SDH:**

- A) Hematoma thickness >10 mm
- B) thickness < 3mm
- C) Chronic symptom > 4 weeks
- D) GCS = 14

Answer: a

**Q7) Classic clinical scenario in epidural hematoma:**

- A) immediate LOC , lucid interval , rapid deterioration
- B) deep coma
- C) progressive headache

Answer: a

**Q8) The best verbal response on the Glasgow Coma Scale**

(GCS) is:

- A. 1
- B. 2
- C. 3
- D. 4
- E. 5

Answer: E.

**Q9) One of the following conditions corresponds to a motor score of 2 on the Glasgow Coma Scale (GCS):**

- A. Obeys commands
- B. Localizes pain
- C. Withdraws from pain
- D. Decorticate posturing
- E. Decerebrate posturing

answer: E

**Q10) Regarding corticosteroid use in traumatic brain injury (TBI), which statement is correct?**

- A. Improves neurological outcome
- B. Reduces cerebral edema significantly
- C. Increases mortality
- D. Has no benefit
- E. Both C and D

Answer: E

# Head Trauma

**Q11) What is the gold standard for intracranial pressure (ICP) monitoring in head injury?**

- a. Intraventricular catheter
- b. Subarachnoid screw
- c. Intraparenchymal monitor

Answer: a

**Q12) A patient presents with prolonged coma following severe head trauma. CT scan: Shows diffuse cerebral edema with loss of gray-white matter differentiation. What is the most likely diagnosis?**

- a. Brain herniation
- b. Diffuse axonal injury
- c. Epidural hematoma
- d. Hypoxic-ischemic encephalopathy (Hypoperfusion)
- e. Cerebral contusion

Answer: b

**Q13) False about subarachnoid Hemorrhage ?**

- a. Maybe with Lucid interval
- b. Most common caused by arterial
- c. Crescent shape on CT

Answer: b

**Q14) A patient with subarachnoid hemorrhage (SAH) and GCS 14 – all of the following are true except:**

- a. Monitor neurological status closely
- b. Control blood pressure carefully
- c. Prepare for possible intubation
- d. Immediate intubation is mandatory
- e. Manage pain and prevent agitation

Answer: d

**Q15) A patient presents with subarachnoid hemorrhage (SAH) and has not recovered neurologically. He had a tonic-clonic seizure with no improvement. What is the most important investigation to perform before surgery?**

- a. Coagulation profile
- b. Toxicology screen
- c. Liver function tests (LFT)
- d. Alcohol level
- e. Sodium (Na) level

Answer: a

# Head Trauma



Q) .... Answer (1----4)

1) All except??

Don't cross suture

2) Indication for intubation except??

Hypoxemia

Rapid loss of consciousness

GCS < 8 Skull fracture

3) Do decompression to???

Relief pressure symptoms

4) GCS ??? Open eye to painful stimuli Displays flexion to pain Incomprehensible sounds

8

Q) answer (A----D)

a case of epidural hematoma :

A) what is the shape?

lens shaped

B) what is the affected vessel?

middle meningeal artery

C) what's the management?

craniotomy and evacuation

D) when to use intubation for epidural hematoma?



مش في السلايد جوابه، هي الجواب من gpt

Q16) The management of a skull fracture is highly dependent on the type and location of the fracture Which of the following statement is

true concerning skull fractures? **مش متأكد**

Select one

- a. Simple non-depressed linear skull fracture is of no significant consequence
- b. ALL depressed fractures require surgery to elevate the depressed bone regardless of neurologic status.
- c. Basal skull fractures involve the base of the calvarium and suggested by bruising about the eye or the ear.
- d. CSF thinorrhea associated with a basal skull fracture requires prompt surgical exploration and repair of the defect
- e. Prophylactic antibiotics are NOT indicated in all basal skull fractures associated with CSF minorthea or otorrhea

Answer: C\E

Q17) Which of the following is not a component of lower motor neuron lesion? Select one:

- a. Disuse atrophy
- b. Absent deep tendon reflexes.
- C. Fasciculations and fibrillations.
- d. Hypotonia
- e. Hyporeflexia

Answer: a

## Quick Summary Table

Situation	Intubate?
GCS ≤ 8	✓ YES
Airway compromise	✓ YES
Herniation signs	✓ YES (urgent)
Respiratory failure	✓ YES
Agitated/uncontrollable	✓ Consider
Stable, GCS > 8	✗ Observe

# Head Trauma

**Q18) Which of the following is NOT a characteristic of subacute subdural hematoma?**

Select one: مش متأكد:

- a. Compression of the lateral ventricle on the side of the hematoma.
- b. Effaced sulci.
- c. White matter buckling
- d. Thick cortical mantle.
- e. Insular ribbon sign.

Answer: e

**Q19) In spite of the best treatment, the highest mortality is associated with: Sele**

مش متأكد:

- a. Extradural Hematoma.
- b. Acute Subdural Hematoma.
- C. Chronic Subdural Hematoma.
- d. Subacute Subdural Hematoma.
- e. Traumatic SAH.

Answer: b

**Q20) Acute onset of the "worst headache of my life" is typical of. Select one:**

- a. Intracerebral hemorrhage.
- b. Subarachnoid hemorrhage.
- c. Cerebellar hemorrhage.
- d. Temporal arteritis.
- e. Brain abscess.

Answer: b

**Q21) All of the following arteries are branches of the basilar artery except the: Select one:**

- a. Pontine Arteries
- b. Middle Cerebral Artery
- C. Posterior Cerebral Artery
- d. Superior Cerebellar Artery
- e. AICA

Answer: b

**Q22) The commonest site for extradural hematoma is: Select one:**

- a. Subfrontal region.
- b. Parietal region.
- c. Parafalcine region.
- d. Temporal region.
- e. Posterior Fossa.

Answer: d

# Head Trauma

**Q23) Which statement is wrong regarding head trauma? Select one:**

- a. Normal ICP is 10mmHg.
- b. A cerebral perfusion pressure < 70mmHg is associated with bad outcome.
- c. Cushing reflex will cause bradycardia and hypotension.
- d. The midbrain passes thru the aperture of tentorium
- e. The uncus is the medial part of the temporal lobe.

Answer: c

**Q24) Cephalohematoma is a? Select one:**

- a. Subcutaneous hematoma
- b. Subaponeurotic hematoma
- c. Subperiosteal hematoma
- d. Subdural hematoma
- e. Subtentorial hematoma

Answer: c

**Q25) The proper method for surgical removal of a chronic subdural hematoma in an adult patient is? Select one:**

- a. burr hole and subdural drain insertion for evacuation
- b. craniotomy and evacuation
- c. endovascular removal
- d. stereotactic removal
- e. puncture and needle aspiration

Answer: a

**Q26) One of the following (must) be evaluated by a conventional cerebral angiogram? Select one:**

- a. meningitis
- b. cerebellar tumor
- c. cerebral tumor
- d. spinal tumor
- e. spontaneous subarachnoid hemorrhage

Answer: e.

**Q27) Acute traumatic intracranial hematomas frequently manifest with?**

مش متأكدہ

Select one:

- a. Hypersalivation
- b. Hyperhydrosis
- c. Seizures
- d. Acute adrenal failure
- e. Toxic shock

Answer: c

# Head Trauma

**Q28) The typical appearance of an acute extradural hematoma on noncontrasted CT-scan of the head is? Select one:**

- a. Hypodense lens shape
- b. Hypodense crescentic shape
- c. Hyperdense crescentic shape
- d. Hyperdense lens shape
- e. Isodense lens shape

Answer: d

**Q29) Source for formation of subdural hematoma? Select one:**

- a. Anterior choroidal artery
- b. Pial veins (cortical veins)
- c. Choroid plexus of the lateral ventricles
- d. Choroid plexus of the 4th ventricle
- e. Arteries of the circle of Willis

Answer: b

**Q30) Transition from prolonged coma to a stable or a transient vegetative state is seen after? Select one:**

- a. brain concussion
- b. diffuse axonal injury of the brain
- c. brain tumour
- d. subgaleal hematoma
- e. epidural hematoma

Answer: b

**Q31) In which type of post traumatic intracranial hemorrhage a "lucid interval" is most likely to be seen? Select one:**

- a. cerebral contusion
- b. brain concussion
- c. epidural hematoma
- d. subdural hematoma
- e. subarachnoid hemorrhage

Answer: c

**Q32) Most Common source for the formation of Epidural hematomas? Select one:**

- a. Cerebral arteries and veins
- b. Choroid plexus of the 4th ventricle
- c. Galen's Vein
- d. Diploic vessels of the cranial bones
- e. Middle meningeal arteries

Answer: e

# Head Trauma

**Q33) According to Glasgow Coma Scale, A severe craniocerebral traumatic injury would score?**

**Select one:**

- a. 1-2 Points
- b. 3-7 Points
- c. 8-10 Points
- d. 11-13 Points
- e. 14-15 Points

Answer: b

**Q34) A fifty four old female patient presented to the emergency department with sudden onset headache associated with repeated vomiting ,her level of consciousness was 14/15 according to GCS,she had a significant neck stiffness, which of the following steps is wrong Select one:مش**

**متأكده**

- a. Urgent CT-scan of the brain
- b. Endotracheal intubation and hyperventilation
- c. Lumbar puncture if the CT-scan revealed no abnormal findings
- d. Ophthalmological examination may be normal
- e. Admission to an intensive care unit for observation

Answer: b

**Q35) Acute Subdural hematomas have more mortality and morbidity than acute extradural hematomas because? Select one:**

- a. They are usually bigger than extradural hematomas
- b. Because they always originate from the large superior sagittal sinus
- c. Because they are always bilateral
- d. Because they are usually associated with severe brain injury
- e. Because they are nearer to the cortex than extradural hematomas

Answer: C

**Q36) Acute intracranial hematomas are those which form during the first? Select one:**

- a. 7 days
- b. 14 days
- c. 10 Days
- d. 3 days
- e. 21 days

Answer: d

**Q37) Epidural hematomas are usually limited by? Select one:**

- a. Cerebral cortex
- b. Choroid plexuses
- c. Falciform Processes
- d. Tentorium cerebelli
- e. Skull sutures

Answer: e

# Head Trauma

**Q38) Otorrhea most often occurs in fractures of? Select one:**

- a. Petrous part of the temporal bone
- b. Frontal Sinus
- c. Cribriform plate of the ethmoid
- d. Sphenoidal sinus
- e. Lacrimal bone

Answer: a

**Q1) MC affected nerve in basal skull fracture?**

CN1

**Q2) Eye opening to verbal stimulation, incomprehensible words and withdraw right arm to pain and localized pain with left arm?**

10

**Q3) High morbidity with parenchymal injury**

السؤال غير معروف بس هيك كان المكتوب

**Q4) Case of trauma ,left fixed dilated pupil,localized pain,inap word ,abn flexiin ,which cranial nerve affect?**

CN3

**Q5) Trauma pt, hypotensive, intracranial hypertension, what is the choice to correct icthn :**

Hypertonic saline 23%

**Q6) Pt has no motor , sensory is present what is ASIA grade ?**

ASIA B

**Q7) What intracranial hemorrhage has better prognosis following treatment:**

Epidural hematoma

**Q8) Which intracranial hematoma cross suture lines :**

Subdural hematoma

**Q9) Gcs of unresponsive patient ?**

3

**Q10) Can't open eyes,incomprehensible sounds,,right abnormal flexion, left decerebrate ,GCS?**

6

**Q11) Differentiates epidural hematoma from subdural?**

Epidural doesn't cross the sutures.

# Head Trauma

**Q12) We used cerebral angiography in which of the following condition?**

Subarachnoid hemorrhage

**Q13) Origin of bleeding in Subdural hematomas?**

Pia veins

**Q14) Origin of bleeding of Epidural hematoma?**

meningeal arteries

**Q15) Acute epidural hematoma CT findings?**

Hyperdense lens shape

**Q16) Treatment of Epidural hematoma?**

Craniotomy + evacuation

**Q17) Most common site of Berry aneurysm is?**

anterior communicating

**Q18) Case with Bradycardia, mydriasis and .... , Dx is?**

intracranial hematoma

**Q19) Cephalohematoma is collection of blood in?**

subperiosteal space

**Q20) Fracture that causes otorrhea?**

temporal bone petrous part

**Q21) One of the following is not step of treatment of Subarachnoid hemorrhage?**

Intubation

**Q22) most common symptom of intracranial hemorrhage?**

seizure

**Q23) which of the following are not ..... regarding subarachnoid hemorrhage : .... ??**

**Q24) Lucid interval seen in?**

epidural hematoma

**Q25) Severe head trauma GCS?**

3-7

**Q26) Character of Subdural?**

cross suture line

**Q27) Duration of acute intracranial hemorrhage?**

3 days

# Head Trauma

Q28) Why subdural more dangerous than epidural or something like that?

more near to brain.

Q29) Injury progress to vegetative state?

Axonal injury



# Subarachnoid haemorrhage

1A) 50 year old female presented to the emergency department with sudden onset of severe headache associated with repeated vomiting, her level of consciousness was 14/15 according to GCS, she had a significant neck stiffness.

which of the following steps is wrong,  
Select one:

- a. Urgent CT-scan of the brain
- b. Endotracheal intubation and hyperventilation
- c. Lumbar puncture if the CT-scan revealed no abnormal findings
- d. Ophthalmological examination may be normal
- e. Admission to an intensive care unit for observation



ANS:B

1B) Factor that favor clipping over coiling ?

- 1) younger age
- 2) multiple co-morbidities
- 3) posterior circulation
- 4) narrow neck

ANS:A

1C) What is the percentage of people who die before reaching hospital ?

- 1) 15%
- 2) 20%
- 3) 50%
- 4) 30%

ANS:A

1D) What is the grade according to Hunt and Hess classification ?

- A) 1
- B) 2
- C) 3

ANS:B

2) WFNS grading components?

- A) GCS and motor deficits
- B) GCS and radiology appearance
- C) prognosis outcome

Ans;A

3) Hunt and Huss grade III ?

- A) asymptomatic with mild headache
- B) moderate to severe headache with nuchal rigidity
- C) drowsiness, confusion with mild neuro focal deficit
- D) deep coma, decerebrate posturing

Ans;C

4) Fisher classification to detect which of complication?

- A) rebleeding
- B) Vasospasm
- C) hydrocephalus

Ans;B

# Subarachnoid haemorrhage

5) Definitive treatment for AVM rupture ?

- A) anti-platelet
- B) endovascular embolization/catheter based occlusion
- C) Antiepileptic

Ans;B

6) The definitive one for subarachnoid hemorrhage (SAH) diagnosis, within first 24 hours, is:

- A) MRI brain
- B) Head CT scan without contrast
- C) Lumbar puncture
- D) Carotid Doppler US

ANS:B

7) According to the WFNS grading system for subarachnoid hemorrhage (SAH), Grade IV corresponds to which of the following?

- A) GCS 13–14, no motor deficit
- B) GCS 13–14, with motor deficit
- C) GCS 7–12, with or without motor deficit
- D) GCS 3–6, with decerebrate posturing

Answer:C

8) In a patient with suspected subarachnoid hemorrhage (SAH), what is the characteristic finding on a non-contrast CT scan?

- A) Hypodense area in the parietal lobe
- B) Hyperintense area in the basal cisterns
- C) Ring-enhancing lesion in the frontal lobe
- D) Isointense lesion in the ventricles

Answer:B

9) drug used to reduce the risk of delayed cerebral ischemia in SAH

- A) Nimodipine
- B) mannitol
- C) levetiracetam

ANS:A

10) Hunt Hess with patient in deep coma decerebrate and decorticate posturing what is the grade

- A) 5
- B) 4
- C) 3
- D) 2

ANS:A

11. The term "sentinel hemorrhage" refers to:

- A. Rebleeding after aneurysm rupture
- B. Hemorrhage following trauma
- C. Initial minor bleed preceding a major SAH
- D. Intraventricular hemorrhage
- E. Post-operative bleed

Answer: C

# Subarachnoid haemorrhage

12. The gold standard diagnostic test for detecting a berry (saccular) aneurysm is:

- A. Non-contrast CT scan
- B. MRI brain
- C. CT angiography
- D. Digital subtraction angiography
- E. Transcranial Doppler

Answer: D

13. Which of the following factors favors surgical clipping over endovascular coiling in SAH?

- A) Elderly age
- B) Multiple comorbidities
- C) Poor WFNS grade
- D) Young age
- E) Narrow-neck aneurysm

Answer: D

14. Severity of SAH detected by —  
**hunt & hess classification**

15) Most common cause of death??  
Rebleeding

16) Doesn't occur before 3 days??  
Vasospasm

16) Great risk for vasospasm??  
Fischer 3

17) 3H ??  
Hypertension, hemodilution hypervolemia

18) About SAH:  
A) don't occur before 3 days  
Vasospasm

B) which of the followings consider as subarachnoid test

- hunt and hess
- WFNS
- other test
- A+B

Ans: A+B

C) why we use CCB

- vasodilation
- Neuroprotective
- Prevent vasospasm

ANS: C

# Subarachnoid haemorrhage

D) factor that favour clipping

- elderly patients
- Comorbidity
- Poor clinical grade
- Good neurological exam

ANS:D

19) Most common cause ?  
trauma

20) What is the most common site of spontaneous cause of SAH

- A. Base of skull
- B. Intracerebral
- C. Intracranial

Ans: A

21) Which of the following factor favor clipping than coiling

- A. Young age
- B. Narrow nick
- C. Multipel comorbidities

Ans: A

22) All of the following could be present in SAH except:  
Arrhythmi

# Subarachnoid haemorrhage

## Fainal

1. False about subarachnoid Hge? (True)

- a. Maybe with Lucid interval
- b. Most common caused by arterial
- c. Crescent shape on CT

ANS: b

2. A patient with subarachnoid hemorrhage (SAH) and GCS 14 - all of the following are true except:

- a. Monitor neurological status closely
- b. Control blood pressure carefully
- c. Prepare for possible intubation
- d. Immediate intubation is mandatory
- e. Manage pain and prevent agitation

ANS: d

3. A patient presents with subarachnoid hemorrhage (SAH) and has not recovered neurologically. He had a tonic-clonic seizure with no improvement. What is the most important investigation to perform before surgery?

- a. Coagulation profile
- b. Toxicology screen
- c. Liver function tests (LFT)
- d. Alcohol level
- e. Sodium (Na) level

ANS: a

4. One is isnt for grading of SAH

ANS: Schatzker

5. Mc cause of spontaneous SAH:

ANS: Berry aneuerysm

6. What complication of SAH never happens in day one?

ANS: Vasospasm

Acute onset of the "worst headache of my life" is typical of:

- a. Intracerebral hemorrhage.
- b. Subarachnoid hemorrhage.
- c. Cerebellar hemorrhage.
- d. Temporal arteritis.
- e. Brain abscess.

Answer: b

# Subarachnoid haemorrhage

## Final

Which of the following symptoms is Not Typical For Subarachnoid Hemorrhage In rupture Of Arterial Aneurism Of Cerebral Vessels?

- a. Kernig's symptom
- b. Brudzinskiy's symptom
- c. occipital stiffness
- d. paresis of the oculomotor nerve
- e. Horner's syndrome.

Answer: e

Which of the following is NOT true concerning subarachnoid hemorrhage?

- a. A large amount of hemorrhage in the basilar cisterns could be a ruptured aneurysm.
- b. Subarachnoid hemorrhage most commonly occurs over the cerebral convexity
- c. Subarachnoid hemorrhage can occur adjacent to a cerebral contusion.
- d. On CT, the hemorrhage appears as focal hypodensity in sulci and fissures
- e. Subarachnoid hemorrhage occurs with injury of small arteries or veins on the surface of the brain.

Answer: d

All the following are causes of loss of consciousness in subarachnoid hemorrhage except:

- a. Increase of intracranial pressure beyond cerebral perfusion pressure
- b. Destruction of important areas of the brain stem
- c. Hypovolemia
- d. The occurrence of seizures
- e. Lateral transtentorial herniation

Answer: c

Patients who have survived a subarachnoid hemorrhage from a ruptured intracranial aneurysm are at risk for all except:

- a. Re-hemorrhage
- b. Cerebral artery vasospasm
- c. Ischemic stroke
- d. Hydrocephalus
- e. Cardiac arrhythmia

Answer: e

A fifty four old female patient presented to the emergency department with sudden onset headache associated with repeated vomiting, her level of consciousness was 14/15 according to GCS, she had a significant neck stiffness, which of the following steps is wrong:

- a. Urgent CT-scan of the brain
- b. Endotracheal intubation and hyperventilation
- c. Lumbar puncture if the CT-scan revealed no abnormal findings
- d. Ophthalmological examination may be normal
- e. Admission to an intensive care unit for observation

Answer: b

# Subarachnoid haemorrhage

## Fainal

Berry aneurysms are usually located in the circle of Willis. The commonest site is?

- a. The basilar tip
- b. The posterior cerebral artery
- c. The anterior communicating artery
- d. The middle cerebral artery bifurcation
- e. The internal carotid artery bifurcation

Answer: c

One of the following (must) be evaluated by a conventional cerebral angiogram?

- a. meningitis
- b. cerebellar tumor
- c. cerebral tumor
- d. spinal tumor
- e. spontaneous subarachnoid hemorrhage

Answer: e

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بجنتنة

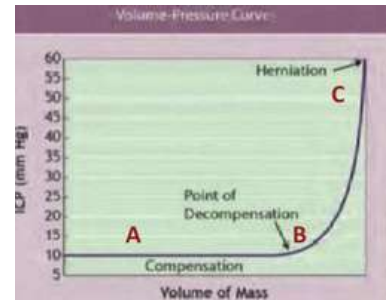
# Intracranial Pressure

Intracranial Pressure Curve:

What is the mechanism of autoregulation in curve A:

- A) By CSF absorption and venous drainage
- B) vasoconstriction
- C) Vasodilation
- D) By brain parenchyma and arterial blood

Answer: A



The patient develops ptosis and a dilated pupil on the right side. Which cranial nerve is injured?

- A) Right optic nerve
- B) Right oculomotor nerve
- C) Left oculomotor nerve
- D) Left optic nerve

Answer: B



What type of herniation is most likely?

- A) Tonsillar herniation
- B) Uncal herniation
- C) Subfalcine herniation

Answer: B

Point B on the ICP–volume curve represents:

- A) Compensation
- B) Herniation
- C) Decompensation
- D) Normal ICP

Answer: C

All of the following are risk factors in ICP monitoring except:

- A) normal CT without any signs and brain swelling
- B) age more than 40
- C) SBP less than 90
- D) Decorticate or decerebrate posturing

Answer: A

According to the Monroe–Kellie doctrine, the total volume inside the skull is constant. Which of the following intracranial contents are included in this doctrine?

- A. Brain tissue, cerebrospinal fluid, and intracranial blood volume
- B. Brain tissue, cerebrospinal fluid, and skull bone
- C. Brain tissue, intracranial blood volume, and skull bone
- D. Skull bone, cerebrospinal fluid, and intracranial blood volume
- E. None of the above

Answer: A

# Intracranial Pressure

point B??

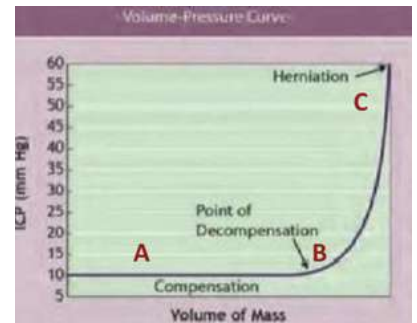
Point of decompensation

2) cause of curve A??

Vasodilation

CSF and venous blood outflow

Arterial blood outflow

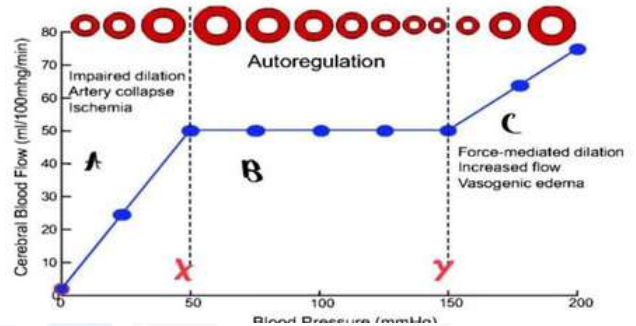


A) what is the type of edema in zone C : **vasogenic**

B) what is the range of MAP in case of head trauma in X and Y :  $x=50$  ,  $y=70$

C) what is the mechanism to maintain zone B : **vasodilation and vasoconstriction**

D) what does zone A represent: **ischemia**



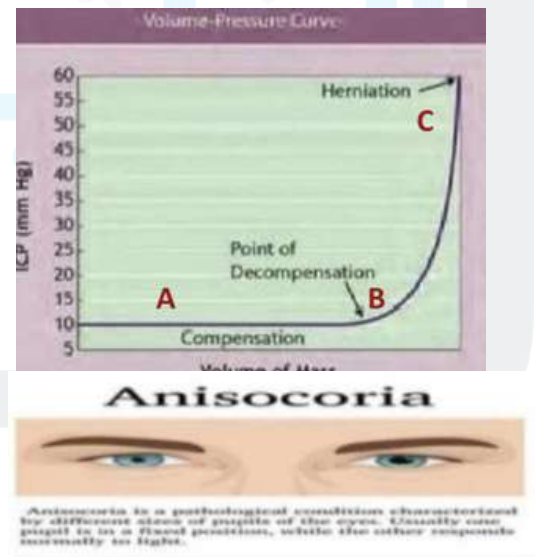
point C? **Herniated**

B) point A ? **Auto-regulation ( compensation)**

C) management ? **ICU + ventilation+ emergency surgery**

Which side of hemisphere is affected?

**Right hemisphere**



## FINAL

All of the following are indications for ICP monitoring in patients with elevated intracranial pressure except:

- Salvageable patient with severe head injury
- Abnormal CT scan
- 50 years old patient with decerebrate posture and normal CT scan
- 55 years old patient with systolic blood pressure 85
- 50 years old patient with INR 4

Answer: E

Normal adult ICP?

**15**

Which one of the following is not a component of Horner's syndrome?

Select one:

- Miosis
- Enophthalmos.
- Anhydrosis
- Exophthalmos
- Correctible ptosis.

Answer: d

# Intracranial Pressure

Which one of the following best describes Lundberg A waves (plateau waves) of intracranial pressure (ICP)?

- a. Periodic self-limited increase in ICP (20–50 mmHg) occurring every 1–2 minutes and lasting several seconds
- b. Periodic self-limited increase in ICP (<20 mmHg) occurring every 4–8 minutes
- c. Periodic sustained increase in ICP (<10 mmHg) lasting for 1–5 minutes
- d. It is a normal ICP waveform with no pathological significance
- e. Periodic sustained increase in ICP (>50 mmHg) lasting for 5–20 minutes

Answer: e

Pt bp 75/35 pulse 130 with high icp, what is the priority:

Correct BP

With the eyeball adducted (turned inward), the depression or downward movement mediated through:

Select one

- a Superior oblique muscle.
- b. Inferior oblique muscle.
- c. Inferior rectus muscle
- d. Medial rectus muscle
- e. Lateral rectus muscle

Answer: a

patient's blood pressure is 120/60mmHg and ICP reading is 30mmHg. What is his cerebral perfusion pressure (CPP)?

Select one:

- a. 50 mm Hg
- b. 30 mm Hg
- c. 90 mm Hg
- d. 60 mm Hg
- e. 70 mm Hg

Answer: a

Which of the following is NOT a sign indicating raised intracranial Pressure?

Select one

- a. Sutural diastasis.
- b. Beaten silver appearance.
- c. Erosion of posterior clinoid process.
- d. Bone vascular invagination.
- e. intracranial Calcification.

Answer: e

Which of the following is not a branch from the external carotid artery?

Select one:

- a. Ophthalmic artery.
- b. Ascending pharyngeal artery.
- c. Lingual artery.
- d. Facial artery
- e. Superior thyroid artery.

Answer: a

Inferior sagittal sinus drains into:

Select one:

- a. Sigmoid sinus
- b. Inferior petrosal sinus.
- c. Transverse sinus.
- d. Straight sinus
- e. Superior sagittal sinus.

Answer: d

# Hydrocephalus

1) Hydrocephalus + urinary incontinence →

Normal pressure hydrocephalus: gait disturbance + dementia (Triad)

.A patient is diagnosed with normal pressure hydrocephalus (NPH). All of the following are true except:

- a. Dementia
- b. Urinary incontinence
- c. Magnetic gait (apraxic gait)
- d. Lower limb weakness

Answer : d

## Final

All of the following are accepted management options for hydrocephalus except:

- a. Ventriculoperitoneal (VP) shunt
- b. Ventriculoatrial (VA) shunt
- c. Lumbo-peritoneal shunt
- d. Ventriculopleural (VPI) shunt

Answer : B

Incorrect about hydrocephalus:

- A- Aqueductal stenosis is the most common cause of communicating HC
- B- Reduce CSF formation is the most effective method in treatment
- C- Meningitis can cause obstructive HC
- D- Late diagnosis and treatment in infancy cause little affect on development
- E- Non of the above

Answer : d (doctor answer)

VP shunt infection?

S.epidermis

Definite treatment for hydrocephalus?

VP shunt

Normal pressure hydrocephalus triad?

Ataxia,dementia,incontinence

Communicating Hydrocephalus except :

ductal stenosis is the most common cause

# Hydrocephalus

All of the following can cause non-communicating hydrocephalus except?

Select one:

- a. Fourth ventricle ependymoma
- b. Colloid cyst of the third ventricle
- c. Choroid plexus papilloma of the lateral ventricle
- d. Cerebellar pilocytic astrocytoma
- e. Brain stem glioma

Answer : C

The two lateral ventricles are separated by:

Select one:

- a. Falx cerebri.
- b. Septum pellucidum.
- c. Cavum vergae.
- d. Corpus callosum.
- e. Tentorium.

Answer : b

Narrowest part of csf flow ?

Aqueduct of sylvius

What is rate affected in elevated ICP

Csf absorption

# Hydrocephalus

What statement better describes Normal Pressure Hydrocephalus (NPH)?

Select one:

- a. NPH is a common condition of newborns and never occurs in teenagers.
- b. Patients with NPH, the ventricles enlarge but the pressure of the CSF is less than normal range.
- c. NPH is a life-threatening condition and should be treated as an emergency.
- d. Diagnostic criteria are easily applied due to knowledge of the underlying pathophysiology
- e. The symptom might improve with shunting is incontinence then gait disturbance & lastly dementia

**Answer : e**  
**( closest answer)**

In children 'Setting sun' is most commonly seen in:

Select one:

- a. Craniopharyngiomas.
- b. Medulloblastoma.
- c. Hydrocephalous.
- d. Head Injuries.
- e. Brain abscess

**Answer : c**

Which one of the following is NOT a standard shunting procedure used in the treatment of hydrocephalus?

- A. Cystic (vesical) shunt → to the urinary bladder
- B. Ventriculoperitoneal shunt → to the peritoneal cavity
- C. Ventriculopleural shunt → to the pleural space
- D. Ventriculoatrial shunt → to the right atrium (heart)
- E. Ventriculosubarachnoid shunt → to the subarachnoid space

**Answer : a**

One of the following is a known method for treatment of hydrocephalus?

Select one:

- a. Perforation of the septum pellucidum
- b. dissection of the cerebellar vermis
- c. puncture of the corpus callosum
- d. ventriculoperitoneal Shunt
- e. Arteriovenous shunting

**Answer : d**

Which of the following is treatment of non-communicating hydrocephalus :

**VP shunt**

# Spinal Trauma

A 19-year-old male suffered a high-speed vehicular accident. He is unable to move his lower limbs. BP = 90/65 mmHg, pulse = 45 bpm. On examination, minimal voluntary movement in lower limb (1/5), full power in upper limb except elbow extension and hand grasp. Sensation absent from chest down. CT cervical spine is shown.

1. What is the most likely type of fracture?
2. A) Jefferson fracture
3. B) Burst fracture
4. C) Hangman's fracture
5. D) Clay-shoveler's fracture

Answer: B

1. What is the most likely spinal level of injury?
2. A) C5
3. B) T7
4. C) C7
5. D) T1

Answer: C

1. What is the cause these symptoms in this patient?
2. A) Hypovolemic shock
3. B) Parasympathetic activity
4. C) Neurogenic shock
5. D) Cushing syndrome

Answer: C

1. Based on the neurological exam, what is the ASIA classification?
2. A) E
3. B) A
4. C) C
5. D) B

Answer: C

Which of the following statements about a burst fracture is correct?

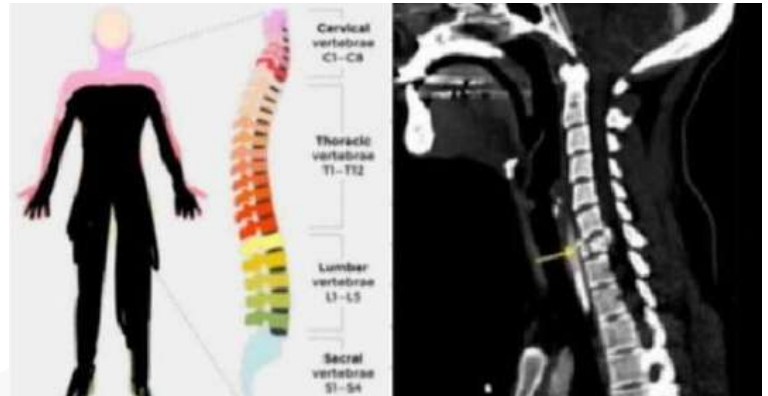
- A) It involves only the anterior column of the vertebra
- B) It usually spares the posterior elements of the vertebra
- C) It is a comminuted fracture with posterior retropulsion of bone fragments

Answer :c

Burst fracture

- A) Anterior and middle part of vertebral body and pressure on spinal cord
- B) Isolated posterior fracture
- C) Anterior part of vertebral body only

Answer :a



# Spinal Trauma

First line treatment in spinal trauma ?

- A) surgery
- B) MRI
- C) neurological examination
- D) immobilization

Answer : d

Brown séquard ?

- A) Upper limb > lower limb weakness
- B) Ipsilateral motor + proprioception loss, contralateral pain/ temp loss
- C) Loss of vibration & position sense only

Answer: b

15) spinal shock first phase ?

- A) flaccid paralysis, areflexia
- B) hyperreflexia, babinski
- C) bradycardia, hypotension

Answer : a

Brown sequard is

- A) Ipsilateral paralysis and contralateral pain and temperature loss
- B) Upper motor weakness more than lower motor weakness
- C) loss of motor and sensory

Answer : a

Which neurologic pattern best characterizes Brown-Séquard hemisection syndrome following lateral hemisection of the spinal cord?

- A. Greater weakness in the upper limbs than the lower limbs with capelike sensory loss
- B. Ipsilateral motor weakness and loss of vibration/proprioception with contralateral pain and temperature loss below the lesion
- C. Loss of vibration and position sense only, with preserved pain and temperature
- D. Bilateral loss of pain and temperature with preserved motor strength
- E. Symmetric spastic paraparesis with intact sensation

Answer: b

first tx in spinal trauma? **Cervical Immobilization**

MC affected nerve in basal skull fracture? **CN1**

# Spinal Trauma

19-year-old male suffered a high-speed vehicular accident. He is unable to move his lower limbs. BP = 90/65 mmHg, pulse = 45 bpm. On examination, minimal voluntary movement in lower limb (1/5), full power in upper limb except elbow extension and hand grasp. Sensation absent from chest down. CT cervical spine is shown. What is the most likely type of fracture? **BURST COMBINED Fx**

Ipsilateral paralysis and contralateral pain and temperature loss? **Brown sequard syndrome**

cauda equina syndrome include —?  
**A+B(urin retention &urin incontinanc)**

Loss of sensation in lower extremities

Motor power 1/5

1) type of fracture? **Burst fracture**

2) ASIA classification? **C**

3) level of spinal cord injury?? **C7**

4) cause of his symptoms??

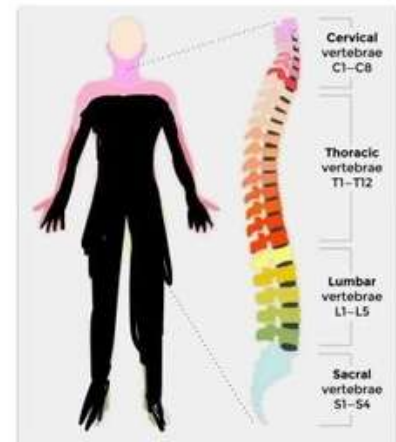
**Cushing triad**

**Loss of parasympathetic tone**

**Neurogenic shock**

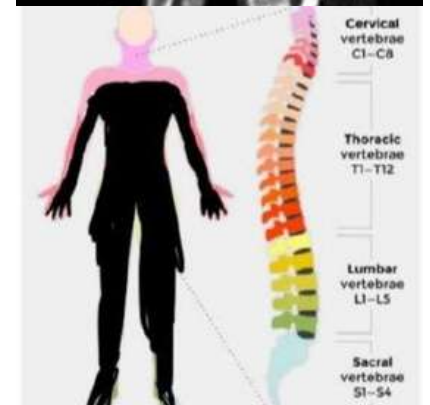
**Hypovolemic shock**

فقدان الإحساس بالأسود صار



19 yo male suffered a high speed vehicular accident. He could not move his lower limbs. BP was 90/65 and pulse was 45. Upon physical examination, he exhibited minimal voluntary movement in lower limb (4/5), and full power in upper limb EXCEPT elbow extension and hand grasp. Sensory completely lost in the parts highlighted yellow (everything starting from chest down to lower limb)?

- What caused these vitals? **Sympathetic loss**
- Which columns involved? **2 columns (burst fracture)**
- Which reflex lost? **Triceps**
- ASIA score? **ASIA D**



# Spinal Trauma

All of the following states can undergo surgery except:

Severe coagulopathy

Most common presentation of acute cauda equina compression?:

Urinary retention and saddle paresthesia

Condition associated with chronic cauda equina compression?:

Neurogenic claudication

## FINAL

All of the following are typical features of Cauda Equina Syndrome except:

- a. Hyporeflexia
- b. Lower motor neuron signs
- c. Saddle anesthesia
- d. Bladder and bowel dysfunction
- e. Pyramidal signs

Answer: e

Jefferson fracture refers to fracture of :

C1

Fracture of one of these levels causes abdominal breathing:

C7

Spinal cord injury ,Upper limb is affected lower is not :

Central cord syndrome

25. What type of fracture is in dens anterior column :

Wedge compression fracture

Mc common cause spinal cord injury:

MVA

Vertebral fracture doesn't cause Neurological deficit?

Compression fracture(cause it's stable)

Not a feature of Conus medullaris syndrome :

anal areflexia

# Spinal Trauma

Which of the following is NOT transmitted via the dorsal column system?

Select one:

- a. Position
- b. Vibration
- C. Pain
- d. Fine touch
- e. Pressure

ANS:C

Modic type two changes are:

Select one:

- a. Low signal T1 and High signal T2
- b. Low signal T1 and Low signal T2
- C. High signal T1 and High signal T2
- d. High signal T1 and Low signal T2
- e. High signal T1, High signal STIR, and Low signal T2.

Answer: c

Which of the following is not a characteristic of brown sequard syndrome?

Select one:

- a. contralateral loss of temperature sensation 2-3 segments below the lesion
- b. ipsilateral loss of position and vibratory sense below the lesion level
- c. contralateral paralysis below the lesion level
- d. ipsilateral pyramidal signs
- e. ipsilateral complete loss of sensation at the lesion level

Answer: c

Which of the following is not a feature of the cauda equina syndrome?

Select one:

- a. flaccid paresis
- b. hyporeflexia
- c. hyper reflexia
- d. symmetric neurological signs
- e. muscle atrophy

Answer: c

most common incomplete spinal injury :

Central cord syndrome

Not a feature of spinal cord hemisection :

contralateral paralysis

Not true regarding spinal cord injury :

More common in pediatrics

# Spinal degenerative diseases

## Station 1

Q1) Which the area sensation loss when this disk herniate 10% Antero medial leg?

L4-L5

Q2) Which clinical feature mostly occur 90% when disk prolaps?

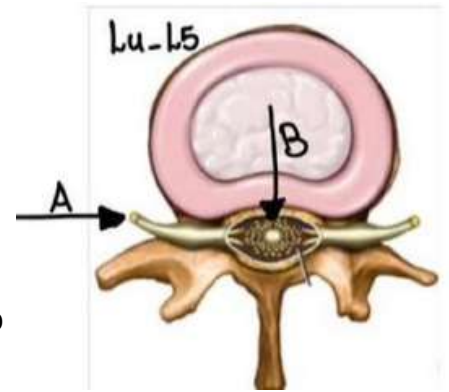
Foot drop

Q3) Chronic compression on area b cause:

Spinal cord injury مش متأكدة

Q4) Clinical manifestation occur in case of acute compression on area b

Urine retention and saddle anesthesia



## Station 2

Prolapse 4,05

1. acute prolapse in site a?

2. acute prolapse in site b?

3. lost?

Shoulder abduction



## Station 3

السؤال كان فيه صورتين صورة ال

spine dermatomes وصورة لل

اللي متضرر حسب صورة ال dermatomes وكان بده نحدد ايش ال spine

لانه اجابة الدكتور مش dermatomes ما قدرت احط صورة لل منطقة مع الصورة

1. which one of these dermatomes will be affected?

2. which of the following will be affected by this compression ?

- hip flexion
- Hip extension
- Dorsiflexion
- Knee extension

Ans : dorsiflexion

C) which of the following isn't a red flag?

- urinary incontinence
- Bowel dysfunction
- knee paresthesia
- Urinary retention

D) neurogenic claudication is :

relieved by rest

Downhill claudication



# Spinal degenerative diseases

Q1) Cauda equina syndrome include?

A+B(urin retention &urin incontinanc)

Q2) Lumbar disc herniation causing radiculopathy? + Supine straight leg

Q3) What is the first line of tx in uncomplicated herniated lumbar disk?

NSAIDS, PHYSIO

Q4) 60 years old patient with Progressive spastic quadriparesis, hand wasting, gait disturbance and X-ray showed cervical osteophytes, what is your diagnosis?

1. A) Lumbar disc prolapse
2. Cervical spondylotic myelopathy
3. Lumbar canal stenosis
4. cervical Radiculopathy

Ans:2

Q5) patient with low back pain, straight leg raise positive, numbness in dorsal of foot, which nerve affected ?

1. A) L4
2. B) L5
3. C) S1
4. D) L3

Ans:2

Q6) Most common presentation of acute cauda equina compression?:

Urinary retention and saddle paresthesia

Q7) Condition associated with chronic cauda equina compression?:

Neurogenic claudication

Q8) If 10% of the nerve is affected (L4), which area is involved?:

Anteromedial part of the leg

Q9) If 90% of the nerve is affected (L5), what occurs?:

Foot drop

Q10) All these symptoms occur with cauda equina syndrome except ?

Spasticity

Q11) Cervical myelopathy, what type of gait ?

Spastic gait

Q12) Lateral disc prolapse at C5/C6 what sensation is affected

Thumb

Q13) What dermatome is innervation of C8

Little finger

Q14) Knee reflex root :

L4

Q15) For lateral L4-L5 disc prolapse causes :

L4 radiculopathy

Pt has no motor, sensory is present what is ASIA grade ?

ASIA B

Q16) Patient presents with neck and supraclavicular pain along with pain in the middle finger and triceps muscle weakness. Which spinal nerve root is most likely affected?

1. C5-C6
2. C6-C7
3. C7-T1
4. C8-T1

Ans:2

Q17) Patient with an L5-S1 nerve root injury is most likely to have which of the following findings?

1. Weakness in foot dorsiflexion
2. loss of Achilles reflex
3. Decreased knee jerk reflex
4. Weakness in hip flexion

Ans:2

Q18) What is the first-line treatment for a patient with spinal disc prolapse (herniated disc)?

1. Physical therapy and pain management
2. Surgery
3. Corticosteroids

Ans:1

Q19) All of the following are typical features of Cauda Equina Syndrome except:

1. Hyporeflexia
2. Lower motor neuron signs
3. Saddle anesthesia
4. Bladder and bowel dysfunction
5. Pyramidal signs

Ans:5

Q20) Which of the following is not a feature of the cauda equina syndrome?

Select one:

1. flaccid paresis
2. hypo-reflexia
3. hyper-reflexia
4. symmetric neurological signs
5. muscle atrophy

Ans:3

Q21) Which of the following nerve roots is involved in the ankle jerk?

Select one:

1. L1
2. L4
3. S3
4. S1
5. L5

ANS:2

Q22) The definition of low back pain in epidemiological studies is which one of the following statements,

Select one:

1. Is any pain between T12 and the sacrum
2. is any midline pain between the sacroiliac joints and the superior margin of L1
3. Is any pain between T10 and the sacrum
4. Is any pain between the costal margin and the buttock crease.

Ans:4

Q23) Right-sided disc herniation at the L5-S1 level typically may cause:

Select one:

1. Low back pain and right sciatica.
2. Weakness of dorsiflexion of the right foot.
3. A diminished or absent left ankle jerk.
4. Diminution of sensation over the medial aspect of the right foot, including the great toe.
5. Weakness of dorsiflexion of the left foot.

Ans:1

Q24) A 36-year-old man developed neck and left arm pain. He noted paresthesia in the left index and long fingers. He was found to have weakness of the left triceps muscle and a diminished left triceps jerk. His left-sided disc herniation is most likely to be at:

Select one:

- a C3-C4
- b. C4-C5
- C. C5-C6
- d. C6-C7
- e C7-T1

ANS:D

Q25) Which of the following is true :

- a. The usual symptomatic lumbar disc herniation occurs in a far-lateral direction
- b. Approximately 95 percent of lumbar disc herniations occur at the L5-S1 or L2-L3 level
- C. Sciatica is a term used to denote pain felt along the distribution of the sciatic nerve:
- d. Weakness of dorsiflexion of the foot is a mechanical sign of a lumbar disc herniation
- e X-ray films of the lumbosacral spine are obtained to demonstrate the presence and location of disc herniation

Ans:c

Q26) A prolapsed intervertebral disc at L3-L4 level in a far lateral direction will produce?

Select one:

1. L4 radiculopathy
2. L3 radiculopathy
3. L5 radiculopathy
4. L2 radiculopathy
5. Cauda equina syndrome

Ans:2

# CNS anomalies

## 1) case about brain congenital anomaly:

A. what the name of the anomaly?

scaphocephaly

B. which CSO most associated with multiple congenital anomaly?

brachycephaly

C. about the management of CSO all true except:

the cut is less than 1 Cm

D. what is the preferred age for surgery?

6 month



## 2)

A. Diagnosis:

Encephalocele

B. Associated with which type of chiari:

Type III

C. Best imaging before operation:

MRI

D. Most common site:

The occipital region



## 3)

\* What is the name of the anomaly?

Scaphocephaly

\*What is the surgery of choice for CSO?

Strip craniotomy

\* What is the most common craniosynostosis present in male?

A. Scaphocephaly

B. Plagiocephaly

C. Trigonocephaly

D. Brachiocephaly



Ans: A

4) What is the most type of chiari malformation present in myelomeningocele?

A. Chiari one

B. Chiari two

C. Chiari three

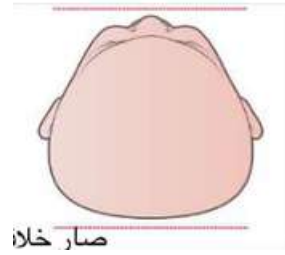
D. Chiari four

Ans: B

# CNS anomalies

5) What is the presentation in this image?

- A. Trigonocephaly
- B. Scaphocephaly
- C. Brachycephaly



Ans: C

6) How to differentiate between positional plagiocephaly and true plagiocephaly?

- A. anterior fontanelle
- B. Ear displaced anteriorly on flattened side
- C. symmetrical head

Ans: B

7) Goal of craniostylosis surgery is?

- A. to correct deformity
- B. for normal suture development
- C. it can cause ICP and brain development issues

Ans: C

8) Which congenital malformation is characteristic of Chiari Type III?

- A) Occipital encephalocele
- B) Myelomeningocele

Ans: A

9) Which cranial deformity results from premature fusion of the sagittal suture?

- A. Narrow and tall skull (Scaphocephaly)
- B. Wide and short skull (Coronal synostosis)
- C. Symmetrical short skull (Brachycephaly)
- D. Asymmetrical

Ans: A

10) Which of the following is not commonly associated with myelomeningocele?

- A. Chiari type 1
- B. Chiari type 2
- C. hydrocephalus
- D. lower limb weakness and bladder dysfunction

Ans: A

11) The suture that would be closed in trigonocephaly

- A. sagittal
- B. lambdoid
- C. coronal
- D. metopic

Ans: D

12) Dandywalker malformation is

enlargement of 4th ventricle & agenesis of cerebellar vermis

# CNS anomalies

12) Head circumference is usually decreased in craniocynostosis:

- A. True
- B. False

Ans: B

13) Primary aim to repair myelomeningocele is:

- A. Hemorrhage
- B. motor weakness
- C. autonomic control
- D. Infection
- E. Cosmetic

Ans: D

14) Time range to repair craniosynostosis is:

- A. 24 hrs
- B. 1mths - 3 mths
- C. 6mths - 18mths

Ans: C

15) The primary aim to treat craniosynostosis is:

- A. Cosmetic
- B. mental retardation
- C. hemorrhage
- D. motor weakness
- E. autonomic control

Ans: A

16) Most common craniosynostosis is:

- A. Scaphocephaly
- B. Plagiocephaly
- C. Brachiocephaly
- D. Trigonocephaly

Ans: A

17) Congenital anomaly incompatibility with life?

- A. Craniosynostosis
- B. Chiari malformation
- C. Encephalocele
- D. Myelomeningocele
- E. Anencephaly

Ans: E

18) Most common craniocynostosis affect which suture?

- A. Metopic
- B. Coronal
- C. Sagittal
- D. Lambdoid

ANS: C

# CNS anomalies

19) Which of the followings is not seen in association with type II Chiari malformation?

- A. Myelomeningocele
- B. Hydrocephalus
- C. Syringomyelia
- D. Cerebellar herniation through foramen magnum
- E. A large posterior fossa cyst in communication with the fourth ventricle

Ans: E

20) Not a feature of Arnold chiari:

- A. Small posterior fossa
- B. Cerebellar tonsillar herniation
- C. Hydrocephalus
- D. cyst compressing 4th ventricle
- E. Beaking of the midbrain tectum

Ans: D

الطبيب والجراحة

لجنة

# Spinal anomalies

myelomeningocele arise from ?

- A) anterior neuropore
- B) posterior neuropore
- C) notochord prematurity

Answer: b

spinal cord malformation (Type I) showing division of the spinal cord into two hemicords is called:

- A) Two cords, each with its own dural sac
- B) Two cords within a single dural sac
- C) Cavity within the spinal cord

Answer: A

Myelomeningocele is most commonly associated with which type of Chiari malformation?

- A. Chiari I
- B. Chiari II
- C. Chiari III
- D. Chiari IV
- E. Dandy–Walker syndrome

Answer: b

Neural tube defects detection through? **AFP+ US**

**FINAL**

What is the most common spinal anomaly?

- a. Spina bifida occulta
- b. Meningocele
- c. Myelomeningocele
- d. Tethered cord syndrome
- e. Diastematomyelia

Answer: A

Time to repair myelomeningocele :

**Within 48 hours**

Myelomeningoceles are congenital malformations of the spinal cord. Which of the following findings are not commonly associated? Select one:

- a. Mandatory urinary incontinence
- b. Chiari II malformation
- C. A midline dorsal spinal mass easily noted at birth
- d. Skin, bone, and dural defects superficial to the neural placode
- e Hydrocephalus

Answer: A

# Spinal anomalies

Myelomeningoceles are congenital malformations of the spinal cord, which of the following findings is not commonly associated with it?

Select one:

- a. Hydrocephalus
- b. Chiari II malformation
- c. A midline lumbar or lumbosacral mass easily noted at birth
- d. Skin, bone and dural defects superficial to the neural placode
- e. Upper limb weakness

Answer: e

A spinal cord malformation (Type I) showing division of the spinal cord into two hemicords is called:

- A. Two cords, each with its own dural sac
- B. Two cords within a single dural sac
- C. Cavity

Answer: a

Myelomeningocele arises from:

- A. Anterior neuropore
- B. Posterior neuropore
- C. Neural crest

Answer: B

After the antenatal diagnosis of a Myelomeningocele in a pregnant woman, one of the following steps is false:

- A. Planning for the mode of delivery
- B. Supplement with folic acid can correct the anomaly in the fetus
- C. Psychological support for the family(counseling)
- D. In some centers in-utero surgery can be offered
- E. The alpha fetoprotein is usually raised in the serum of the pregnant mother

Answer: B

“لا يخيب الله من سعي، ثق بالشفاء مادمت  
تستشفي، وبالرزق مادمت تكدح، وبالوصول مادمت  
تجاهد، وبالفرج مادمت ترضى، وبالإجابة مادمت تسأل  
وتلحّ، لا تملّ! ولا تبرح الباب، لا تخذلك عجلتك في  
المنتصف، ولا تقف وقد بدا النور قريباً، واصل المسير،  
صبحُ أمانيك دنا، بُشرى لك ”