

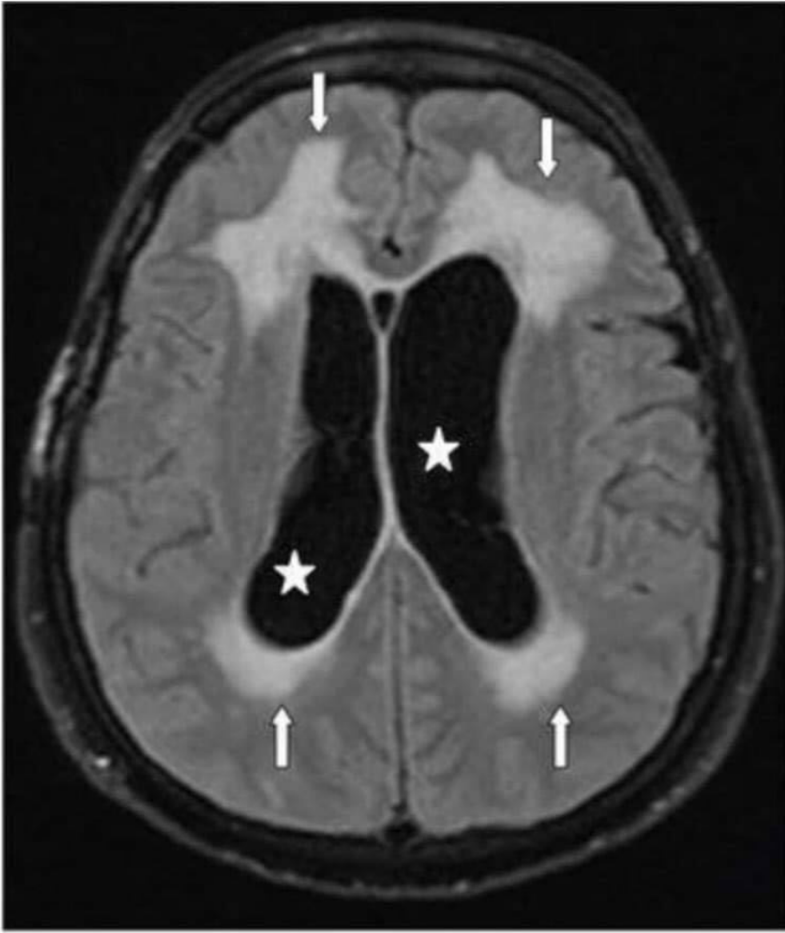
لجنة الطب البشري - الجامعة الهاشمية

PAST PAPERS - MINI OSCE



NEURO-SURGERY

Hope



- Describe the type of imaging shown
- What is the most likely pathology seen & what's the finding in this image?
- Mention 2 types of congenital etiologies for this condition

Q. A patient lost his motor function but still has some sensory functions intact

- what's his Asia score?
- What is the Pathophysiology of Spinal Shock?

Q. Patient had head trauma, on arrival to ER, his eyes are opened, strange sounds come out of his mouth, he's flexing away from the pain.



- what's his GCS?
- Describe the type of imaging used and what's the most likely pathology seen?
- Mention 3 indications for surgery this patient

Question about brain tumor with MRI image. Patient has olfactory and auditory hallucinations, blood pressure (systolic/diastolic) & cerebral perfusion pressure are given in the question.

- calculate the intra-cranial pressure
 - What is the most likely pathology? Meningioma (the MRI was crystal clear for that)
 - Mention 3 medical managements for brain tumors
-
- what is the pathology seen?
 - What is the management for this condition?



**The previous questions were included in Group A44/A4 Neurosurgery Exam on December 1st, 2021

L4/L5 herniation picture

1-type of picture

2-pathological finding

3-red flag

4-surgical intervention name

Tumor picture

1-type of picture

2-3-tumors in the posterior fossa in pediatric

Hydrocephalus

1-type of picture

2- diagnosis

3- 2 sign

Patient with myelopathy

1- diagnosis

2- sign of myelopathy

3-pathophysiology

صورة ال MM

What is the pathology
Mention 2 risk factors

Describe findings

What is the Non surgical therapy

Mention 3 red flags of back pain

with LBP pain since 4 months.
Increased in severity over the
last 2 weeks. On examination,
she has normal power in both
lower extremities. L-spine
MRI was performed for her.

Answer the question
in your answer sheet.



What is the Muscle

What root

What is the name of the movement

42-yr old male pt.
presented to the neuro
clinic with complaints of
neck pain and U.L
Paresthesia.

Answer the question
in your answer sheet.

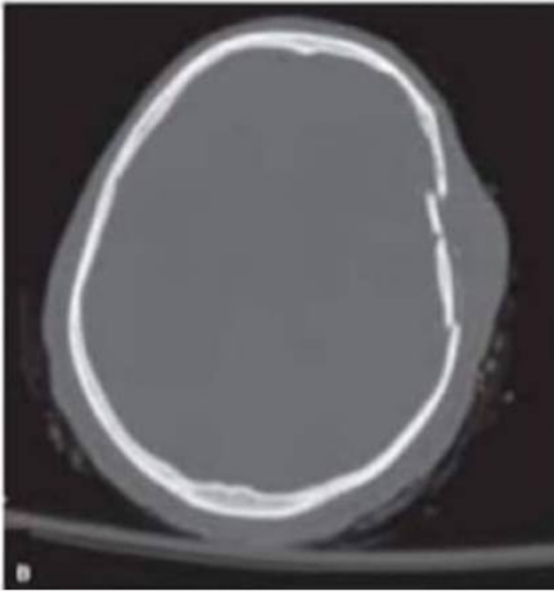


-1

CT of a depressed skull fracture with history

-what is the GCS of the patient

-what is your findings

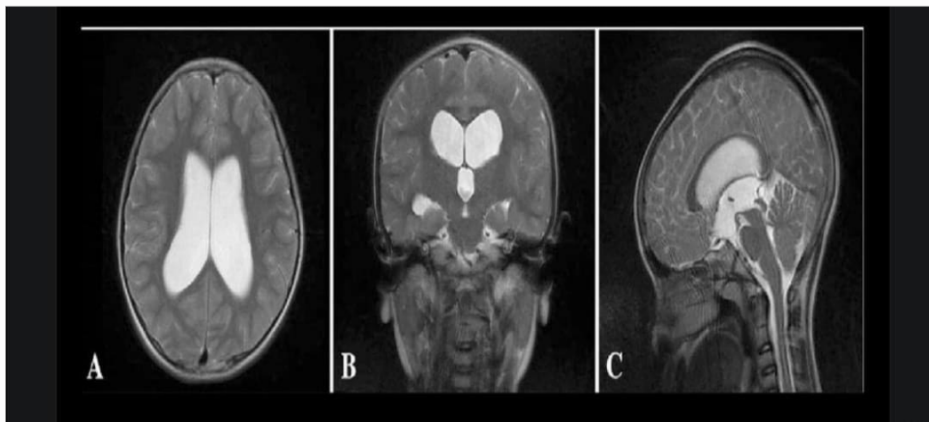


-2

melominogiocyle photo and the head circumference was given "38 CM"

-what is the pathology

-mention 3 risk factors



-3



- *photo of Brachiradoalis reflux*
- what is the muscles and its action
- nerve root

- 4
- *photo of a multiple lumbar disc with history*
- imagining modality
- Conservative treatment
- What is your findings
- red flags of back pain



- 5
- *MRI of hydrocephalus*
- imaging modality
- sequence
- pathology

Q1- Normal CT

- A. The structures labeled with arrows: lateral ventricles (anterior horn) and calcified choroid plexus
- B. Write 3 structures and pathologies appears white on this image

Q2 axial CT for subdural hemorrhage

- A. Describe the lesion (write 4 descriptions)
- B. Write 3 indications for surgery for the case shown above

Q3. A patient comes with low back pain that radiates to the anterior thigh and anterior knee (without any image)

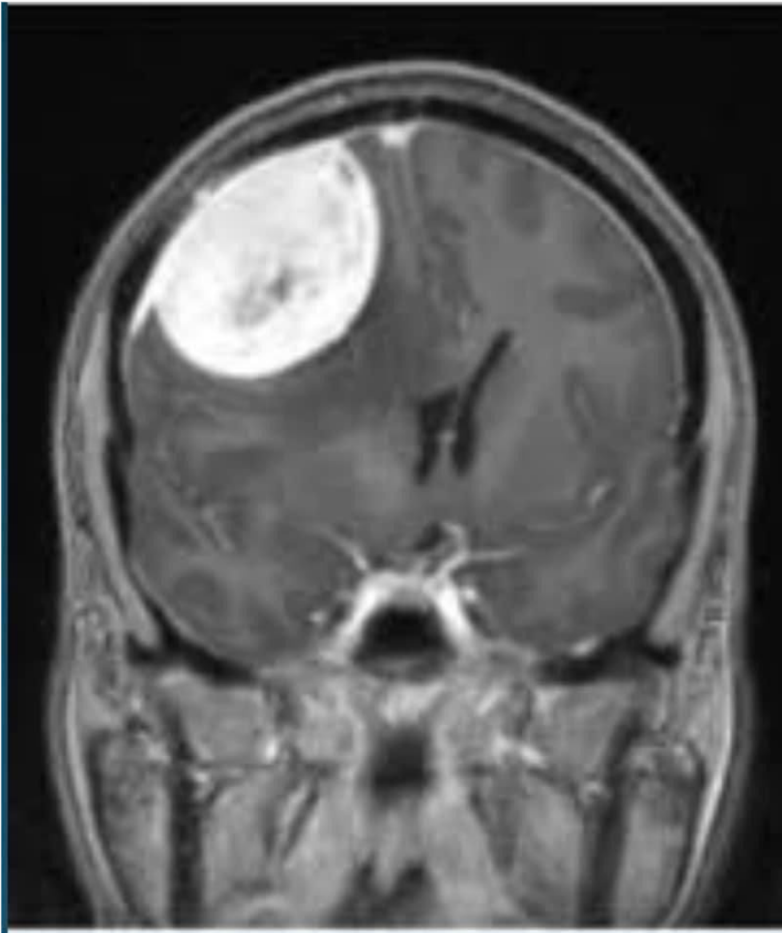
- A. What is the nerve root affected
 - B. Determine the site of the lesion
 - C. Affected movements
 - D. Absolute indications for surgery for this case
-

Q1: Patient presented with headache and hemiparesis

1-Name this study

2- What is the most likely diagnosis

3-Mention 2 medications that can be given for this patient



Q2: What is the nerve being examined?

2- mention 2 sensory functions of the nerve

3- what is the autonomic function of this nerve?



Q3: patient presented with history of low back pain

1- What is the level of pathology

2- what nerve root is affected

3- Mention 3 red flags for low back pain



Q4: Patient with history of RTA:

1-Name these signs.

2-What is the underlying type of traumatic brain injury

3- Write 3 other S & S of this condition



Q5:

1- Mention 2 signs can be seen in this patient

2- What is the syndrome?

3- Mention 2 surgical interventions to manage this case



1- what is the level of disk prolapse? L5-S1

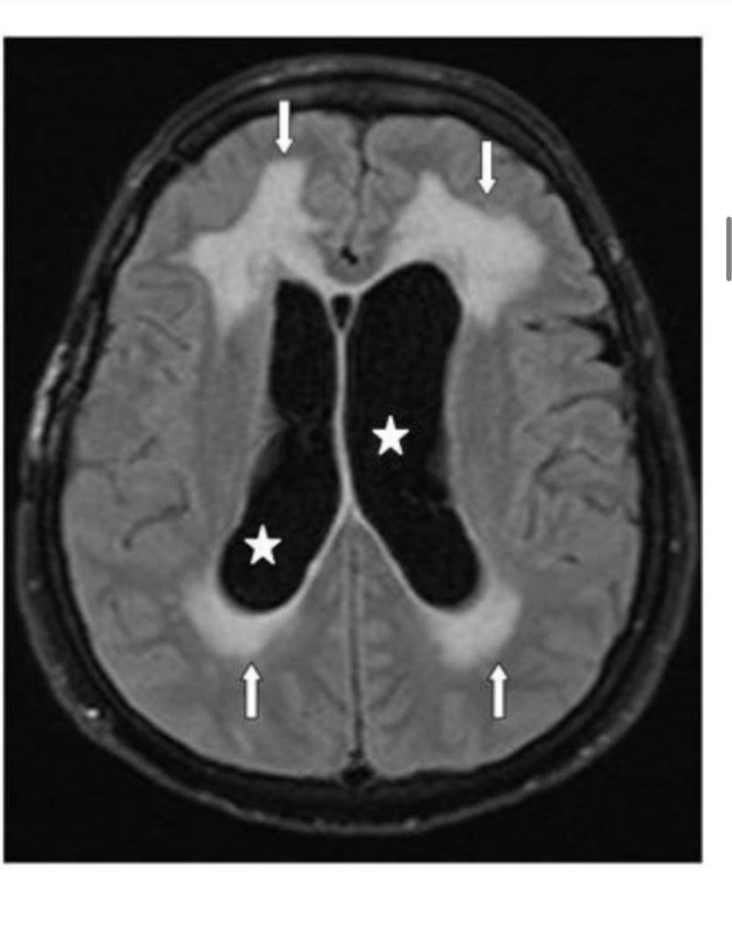
2-Which root is affected? S1

3-Red flags? Significant weakness, urinary incontinence, progressive neuro deficit



The white arrow refer to which sign? Seepage sign

2-what is the pathophysiology of this condition? Enlarged ventricles due to increase csf within ventricles leading to increase Icp because of many reasons such as communicating and non communicating hydrocephalus



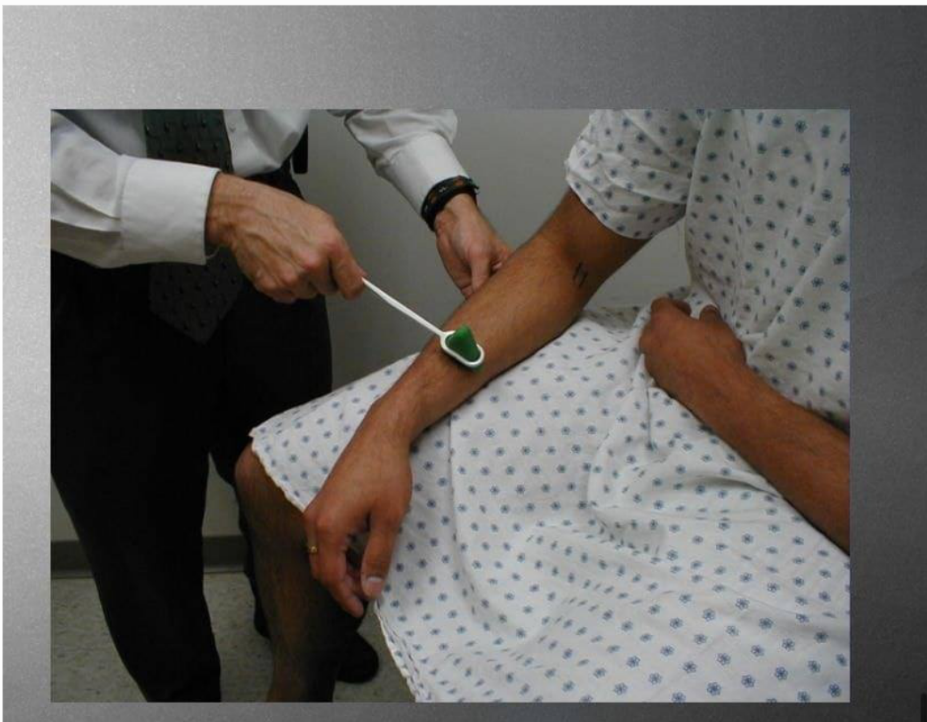
1-What is your diagnosis ? Myelomeningocele

Mention 3 risk factors? Family history, folic acid deficiency, maternal h.pylori infection



1-This procedure test which muscle? Brachioradialis

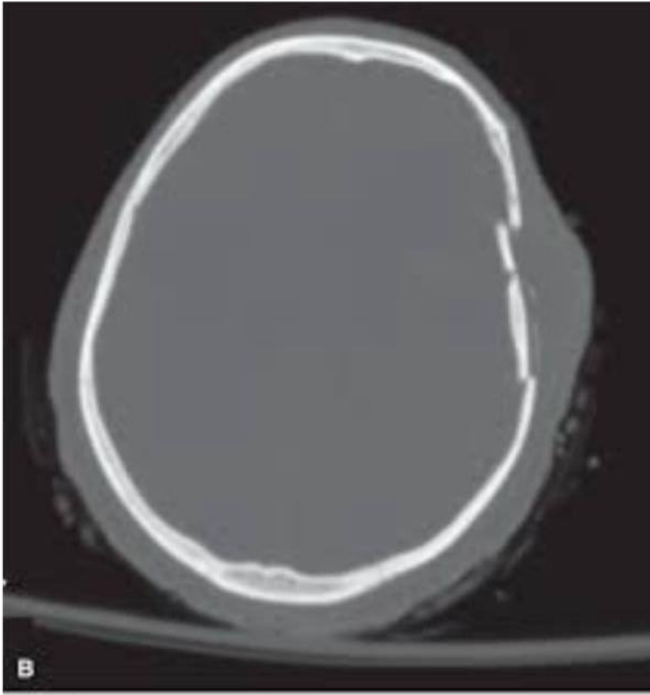
This muscle supplied from which segment? C6 3-what is the action of this muscle? Supination of forearm



1-What is your differential diagnosis? Depressed skull fracture

2-mention two complications? Focal neurological deficit due to

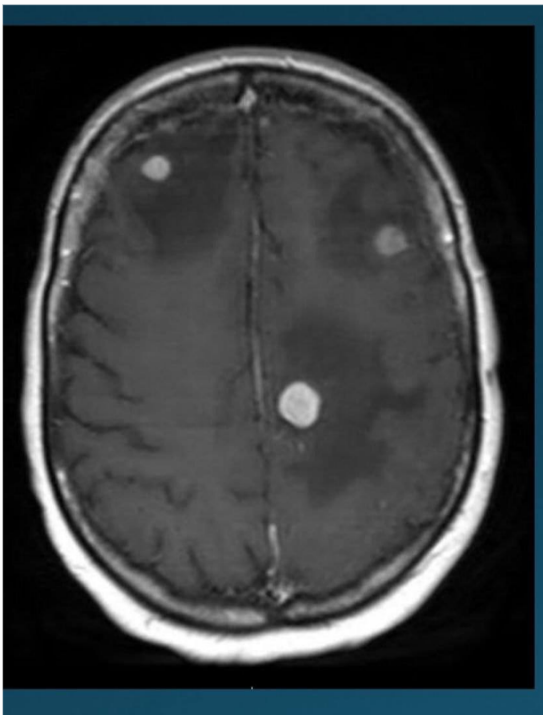
compression on parenchyma, epidural hematoma



What is the type of this picture? MRI T1

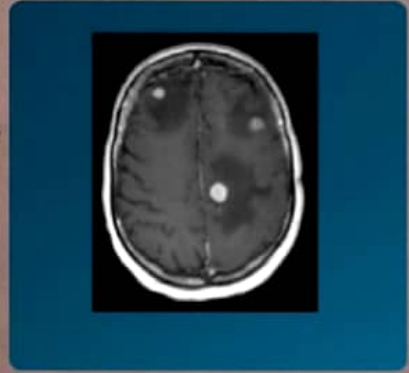
1-What is your diagnosis? Mets

2-What is the primary cause of it? And its risk? Lung tumor, smoking



Q 3.

A. What is the most likely diagnosis?

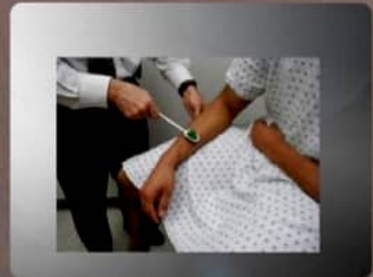


B. What is the most likely primary disease and its risk?

C. Mention 2 other possible symptoms in the patient.

Q 4 .

A. What muscle is being tested?



B. What nerve roots are being tested?

C. What is the corresponding action of the test?

Q 5.

A. What is the level of the pathology?



B. What spinal nerve roots most to be affected?

C. Mention 3 red flags of the pathology seen

**CONFUSED, OPEN EYES TO
SPEECH, LOCALISIC PAIN**

Q 6.

A) What is the GCS of the patient?



B) Describe the finding seen in the CT-scan bone window.

C) Mention 2 possible complications of this head injury.

Q 1.

A. Describe the type of imaging used.



B. Name the sign indicated by white arrows.

C. What is the pathophysiology of this finding?

Q 2.

A. What the pathology seen in this patient ?

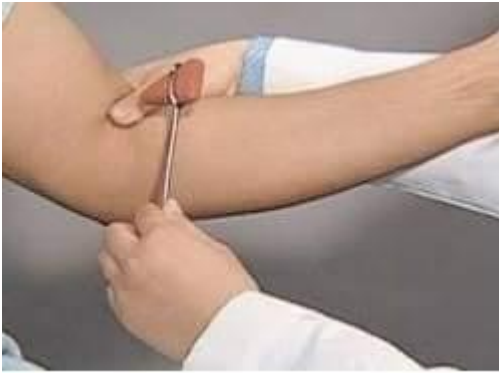


B. Mention 3 risk factors of this congenital anomaly.

Neurosurgery
Minor questions
Wateen 2021

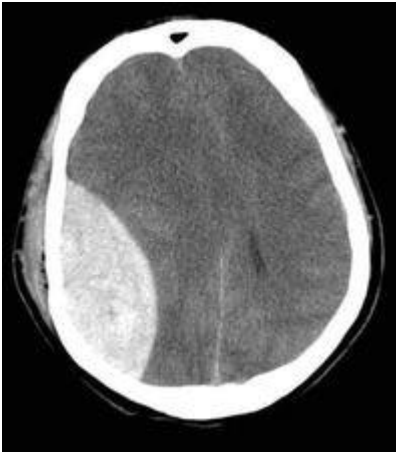


Wateen batch



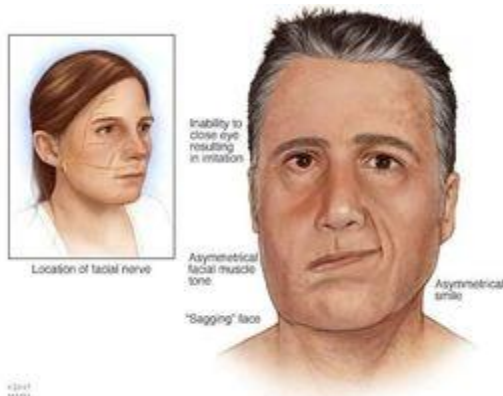
1)

- **What is the test done in the pic?** Deep tendon reflex for biceps muscle
- **What is the nerve root responsible for?** C5
- **Write three possible outcomes?** Hyporeflexia , hyper reflexia, hyper reflexia with clonus
- **Write three signs of UMNL.** Hyper reflexia , +ve Babinski sign , spasticity



2)

- **What is the diagnosis?** Epidural hematoma
- **What is the common source of this condition?** Middle meningeal artery
- **Write a main cause for the diagnosis.** Head trauma



3)

- **What's the name of this condition?** Rt facial N palsy
- **What is the affected side?** Rt side
- **How can you differentiate UMNL from LMNL In this patient?** If the paralysis involve all rt half of face -> it's LMNL , If the paralysis involve just rt inferior quadrante of face -> it's UMNL

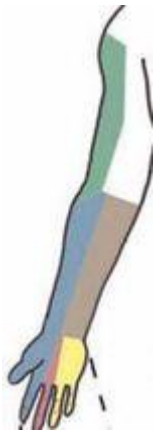


4)

What is the test done?

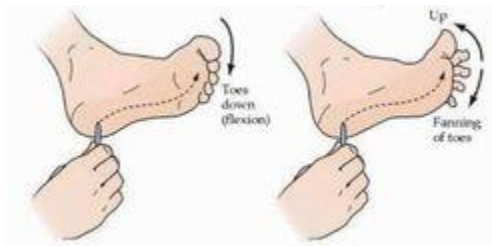
Which tract is responsible for it?

Mention other functions for the same tract



5)

- Patient loss his pain and temperature sensation in the blue and green area :
- What is the nerve root affected ?
- What is responsible tract ?
- If he has disc prolapse, mention 2 other symptoms he will have



6)

- What is this test ?
- Signs of upper motor neuro lesion ?
- Paraplegia at nipple level , what is the affected nerve root ?



7)

- What is the test ?
- The afferent and efferent nerve responsible for it ?
- Mention 2 mastication muscles?
- What is the nerve affected if he has Facial muscles weakness?



8)

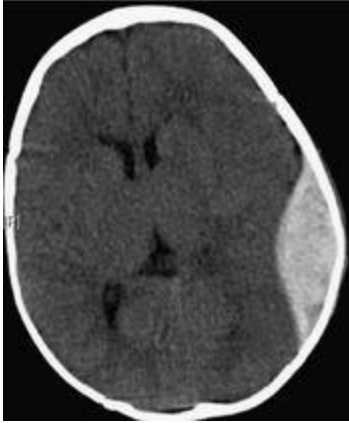
- What is the type of image?
- What is the diagnosis?
- signs of base skull fracture?
- If he has Left sided dilated pupil what is the cause ?



9)

a patient who had low back pain complained of numbness in the big toe

- mention 3 red flags for low back pain
- which nerve root is most likely affected?
- mention 1 indication for surgery in this patient



10)

A confused patient, who can localise pain and can open eyes to verbal command

a) what is the type of imaging used

b) calculate the GCS for this patient (mention the components)

c) what is the main source for this bleeding

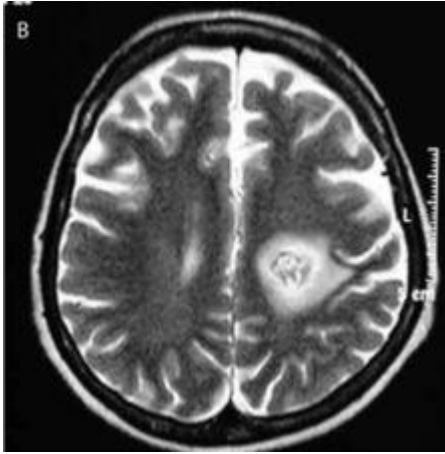


11)

a) which nerve supplies medial rectus?

b) which nerve supplies superior oblique?

c) which nerve is most likely affected based on the attached image?

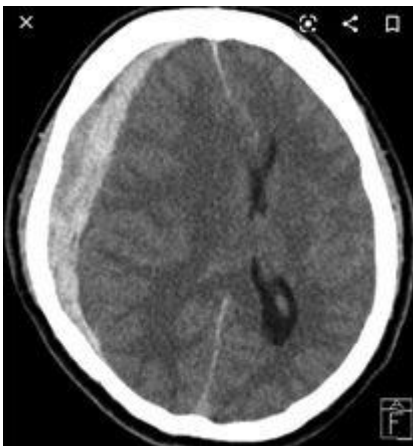


12)

a) what is the type (and subtype) of imaging used (T2-weighted MRI)

b) mention 3 signs of upper motor neuron lesion

c) mention 3 primary brain tumors



13)

Patient takes warfarin

- what is the type of image ? Brain CT scan axial view brain tissue window without contrast
- identify the lesion ? Acute subdural hematoma
- how you can reverse the action of warfarin ? Vit.K or fresh frozen plasma in ER

14) hydrocephalus name study>> CT scan ,give 3 sign and symptoms of icp >>

15) female pt with low back pain and pain in smallest toe

- **Red flags for low back pain.** urinary incontinence , fecal incontinence
- **Most probable nerve root effected? s1**
- **Best imaging method? spinal MRI**
- **mention 2 signs you can see by examin her knee?**

16) best investigation for each branch >>

- **.Stroke pt in Er: brain ct scan**
- **.Brain tumor: t1 w contrast**
- **.Paraesthesia and weakness and umnl sign: spine ct**
- **.5th nerve neurolagia: crp and cbc**
- **. Fever after surgery: crp ,cbc**
- **.one year of disc prolapse sign: spine mri**
- **.trauma of head and loc: brain ct**

17) pt with Little and ring fingers pain

- **2 differential diagnosis. cubital tunnel syndrome, C8 nerve root compression**
- **Nerve root in triceps reflex. C7**

Harmony batch

1) This patient was brought to ER due to accident , he opens his eyes in response to verbal stimulus , localizes the site of pain , and making sounds .

- What is GCS ? 10
- What is this sign ? Raccoon eyes
- What is the diagnosis ? Basal skull fracture
- Mention 2 other signs can be seen ?
Hemotympanum (blood in middle ear)
Battel's sign (contusion on mastoid process)



2) Patient fell down from 2 meters he had total paralysis and decrease of sensation below umbilicus.

- What is the level of lesion ? T10-T11
- .Indications to do CT scan in spinal injury ? Neurological defects / Severe continuous pain for more than 6 weeks
- .What is ASIA grade ? B
- . What is TLICS if he had suspected posterior ligament complex damage and burst fracture ? $2+2+3 = 7$
- .Does the patient need a surgery ? Yes , TLICS is >4

3) Patient came with severe pain and sth about inability to perform plantar flexion and pain along posterior part of the leg

- The nerve root affected ? S1
- He can only flex his leg against gravity , what is the grading of muscles ? 3
- 2 signs can be seen in exam ? Straight leg raising / Bragard sign
- indication for surgery ? Instability / neurological defects / bone deformity / severe pain

4) Patient with weakness in the left part of body , the pic is for his investigation , discovered mass in the right side

- What is the radiological mechanism ? MRI T1 with contrast
- Mention 2 ways to describe the pathophysiology of weakness on left side ? Mass effect on right motor cortical area /
- 3 signs can be seen in exam ? Hyper reflexia / hyper tonicity /
- Give 2 radiological findings ? NOT SURE – describe the mass effect , midline shifting , what lobe affected , hypointense area

5) Image of cerebellar tumor

- describe the picture

MRI T1 waited image, sagittal cut w/contrast

- write the 3 most common posterior fossa tumors in children
medulloblastoma , pilocytic astrocytoma, ependymoma

6) Image of hydrocephalus

- describe the pic

CT axial cut w/out contrast tissue window

- write 3 signs

abnormal head circumference, macewen's sign, setting sun sign ,...

7) Image of depressed fracture

- Describe the picture CT scan

axial view bone window without contrast showing left parietal lobe depressed fracture with no complications

- write 2 indications for surgery

Full thickness or more than 1 cm bone depression.

Cosmetic reasons.

Compound fracture

- if the patient deteriorates what would be the cause?

Mass effect mostly

8) Image of herniation

- describe the pic

MRI T2 w/out contrast sagittal cut

- what's the problem? L4-L5 disc herniation/prolapse

- Whats the red flags for back pain ?

TABLE 1

Red Flag Findings in Patients with Low Back Pain

Possible etiology	Historic findings (strength of evidence)	Examination findings (strength of evidence)
Cauda equina syndrome	Progressive motor or sensory loss, new urinary retention or overflow incontinence, new fecal incontinence (strong)	Saddle anesthesia, loss of anal sphincter tone, significant motor deficits encompassing multiple nerve roots (strong)
Fracture	Significant trauma relative to age (strong) Prolonged corticosteroid use (intermediate) Age older than 70 years, osteoporosis (weak)	Contusions or abrasions (intermediate)
Infection	Spinal procedure in the past 12 months (strong) Intravenous drug use, immunosuppression, distant lumbar spine surgery (intermediate)	Fever, wound in the spinal region (strong) Localized pain and tenderness (weak)
Malignancy	History of metastatic cancer (strong) Unexplained weight loss (intermediate)	Focal tenderness and localized pain in the setting of risk factors (weak)

Information from references 3, and 5 through 7.

- 9) Image: CT scan of acute subdural hematoma, a patient presented to the ER, 2 hours after falling down from a 2 meters height with a GCS of 12 (eye open on pain and he is confused) :

- what is the motor component of his GCS
6 moves on verbal command
- the patient has an uncal herniation, give one sign that you'd see on him
Oculomotor nerve palsy → dilated pupil, ptosis, Diplopia
- what does the imaging of this patient reveals
Acute subdural hematoma
- if you know that the patient has hydrocephalus, name 2 pharmacological treatments
Mannitol



10) a female patient with a history of breast ca presented with sensory abnormalities in the level halfway between the nipple and umbilicus, on physical examination she was only able to flex her hip against gravity .

- what is the level of the lesion

T7 (at the level of xiphsternim)

- describe the lesion above

Ring-enhancing lesion in the right parietal lobe

- what is the motor grade of her hip flexion muscles

3

- give 2 other signs that you would expect in this patient on physical examination

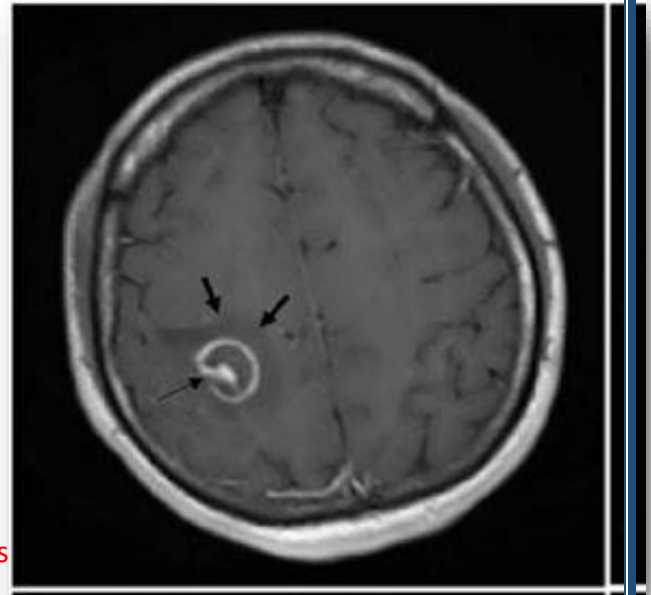
Upper motor neuron signs (hypotonicity, hyporeflexia, ...)

- what do you think is the cause of the patient's problem based on the history and imaging

Metastatic lesion from breast

- Name the study

MRI scan T1 with contrast



11) an image of an infant with a myelomeningocele and increased head size

- what is the abnormality shown on the picture

Myelomeningocele

- what is the cause of the increased head size

hydrocephalus

- give 2 other sign you would see on this patient

Sun setting sign

Increased head circumference

Converging eyes

- give one treatment strategy for this patient

Ventriculoperitoneal shunt



12) Contusions

- Name study

- describe findings

- what will you do in term of investigations if the patient lost consciousness after 3 hours

13) I4-I5 disc protrusion

- Name study
- describe findings
- when will you do surgery

14) meningioma

- Describe finding
- name study
- most common diagnosis

15) hydrocephalus

- 3 surgeries you can do
- 3 signs

16)

- mention the diagnosis
Acute subdural hematoma
- mention the cause of left dilated pupil
- Oculomotor nerve palsy
- the patient icp was 25mmhg mention 2 bedside procedure to do
 - position at 30 degree
 - diuretic like mannitol
- the patient suffered from tonic clonic seizure what to do
 - safe environment
 - do abc



17) Q2/

1-Name the study

MRI T2 without contrast

2- what is name of syndrome that causes spinal cord compression

Myelopathy

3- mention 2 signs the pt have (the pt have spinal cord compression so he suffers from UMN)

-babinski , hoffman

4- the pt had trauma and suffered from upper more than lower extremity weakness ?

Central spinal cord syndrome

18) Q3 9 year old month pt Have hydrocephalus

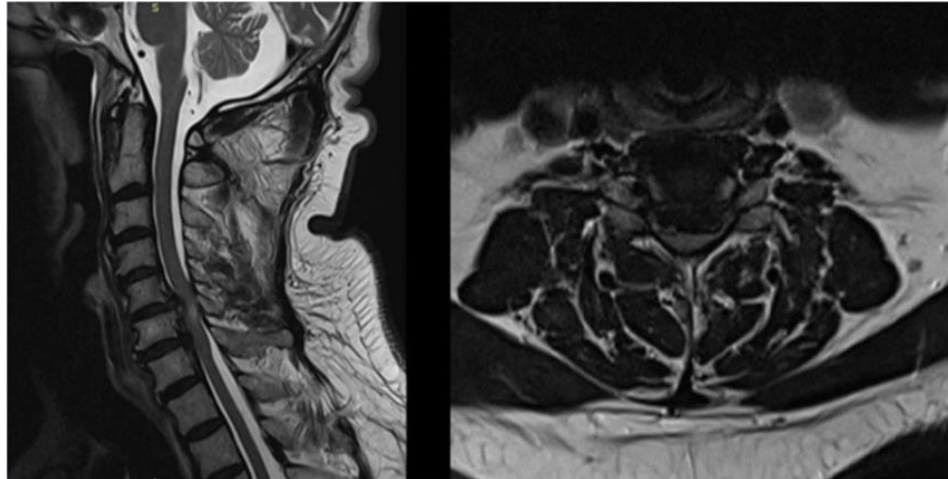
1- mention 2 symptoms

Headache nausea vomiting

2- mention 2 signs

Sunsetting eye
Frontal bulging
3- mention 2 types of hydrocephalus
Communicating and non communicating
4- mention the ttt
Ventriculoperitoneal shunt or EVD

19) 59 years old male patient with bilateral lower limb weakness.



- Name the radiological study & the sequence shown?
- Describe 2 findings in the MRI scan?
- Mention 2 likely presenting symptoms?
- Mention 3 likely signs on examination?

20) This newborn developed a progressive increase in the head circumference.

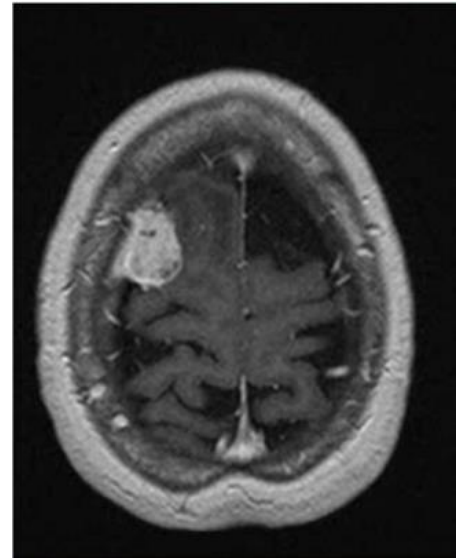


- What is the lesion depicted in a photograph?
Myelomeningocele

- What is the most likely cause of the increase in the head circumference?
hydrocephalus
- Name 2 signs likely to be associated with this diagnosis of increase the head circumference.
Parinaud's syndrome, 6th nerve palsy, Bulged Anterior Fontanelle,...
- Name one investigation to confirm your diagnosis for increase the head circumference.
CT scan
- Name one treatment option for the cause of increase the head circumference.
Surgical repair (not sure)

21) 67 years old female patient, presented to A&E with generalized tonic- clonic seizure.

- Name the study & the sequence depicted
- Name 2 drugs that can be used terminate his seizure
- Mention 3 symptoms of increased intracranial pressure
- Mention 2 possible definitive ttt modalities



22)

- mention the diagnosis
Acute subdural hematoma
- mention the cause of left dilated pupil
Oculomotor nerve palsy
- the patient icp was 25mmhg mention 2 bedside procedure to do
position at 30 degree , diuretic like mannitol
- the patient suffered from tonic clonic seizure what to do
safe environment , do abc

23)

- Name the study
MRI T2 without contrast
- what is name of syndrome that causes spinal cord compression
Myelopathy

Myelopathy

- mention 2 signs the pt have (the pt have spinal cord compression so he suffers from UMN) . babinski , hoffman

- the pt had trauma and suffered from upper more than lower extremity weakness ? Central spinal cord syndrome

24) 9 year old month pt Have hydrocephalus

- mention 2 symptoms Headache nausea vomiting
- mention 2 signs .Sunsetting eye , Frontal bulging
- mention 2 types of hydrocephalus .Communicating and non communicating
- mention the ttt . Ventriculoperitoneal shunt or EVD

Groups B4/B44

THESE PICTURES BELOW ARE FROM THE INTERNET, THE DOCTOR AT THE EXAM GAVE US PICTURES OF CURRENT ADMITTED PATIENTS AT THE HOSPITAL.

Q1:



1. Describe this picture? (CT scan, axial, frontoparietal lesion, brain window, ...)
2. What is your diagnosis? (Acute Subdural hematoma)
3. The patient presented above with Fixed undilated left pupil, what do you think is the cause? (uncal herniation which led to 3rd nerve palsy)
4. If the patient had a Blood Pressure: 90/60 and ICP was 12, what is the CPP?
5. What is the management of increased ICP?

Q2:



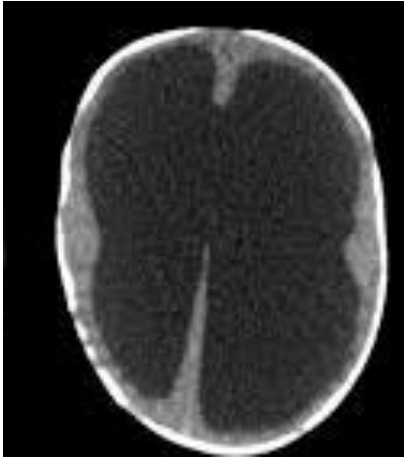
1. What do you see in this picture? (ring enhancement lesion)
2. Describe this MRI? (T1 with contrast)
3. Why when you gave this patient Steroids he improved? (because of decreased edema)
4. If the patient had a seizure what you will do to treat him at the bedside?

Q3:



1. At what level is the lesion? (c3-c4)
2. What is your diagnosis? (disk prolapse/herniation)
3. What do you expect this patient will have when you do physical examination for him?

Q4:



1. Mention 2 of the causes of head enlargement?
2. What is your differential diagnosis for this patient? (hydrocephalus)
3. Mention some of the causes of hydrocephalus?
4. Mention 2 ways to treat the patient before he does the surgery?

Q1: Describe the MRI imaging study? 2 marks :

She was a female patient come

A1: MRI AXIAL CUT – T1 – WITH CONTRAST

Q2: IF A patient has seizures attack what u will do first to him? 2mark

1) check safety first → keeping the person safe protect patient from injury around him → maintain ABC

Q3: mention three blood lab investigation you should do it for a patient has devolved with first seizure attack ? 3marks

Answers: 1-CBC & CRP if you suspect infection 2-Liver & Kidney Function tests 3- ELECTROLYTES

Q4: What symptoms will appear on this patient? (The patient have had a frontal mass)?

1- Return of primitive Reflexes, Change in judgment & Behavioretc
2- Headaches, Seizuresetc

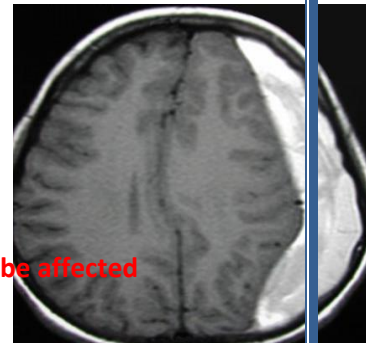
CASE SENIRO WITH A PIC OF CT SCAN WITH LEFT SUBDURAL HEMATOMA

Q1: what's your diagnosis? 2MARKS

Acute subdural hematoma, there was also diffuse cerebral swelling

Q2: Patient has anterior spinal artery syndrome mention two tracts that would be affected ? 2marks

1- Corticospinal Tract
2- Spinothalamic Tract



A case with a picture of central disc prolapse

Q1: what is the level of the lesion? 2mark

A: The picture had obvious herniation on C4-C5 and little ones on C5-C6 and C6-C7

Q2: what is pathology cause of the lesion mention two other than disk herniation ? 2marks

A: 1) Degenerative disk disorder



- 2- Cervical Extramedullary intradural tumor
- 3- Articular Hypertrophy

Q3) Mention three signs the patient will developed? 3MARKS

→ Since it is myelopathy then it is UMN signs
So i said 1-Babinski sign 2-hoffman sign 3-hyper-reflexia

Q4: mention the name of the constellation of symptoms the patient will complain from?

3marks

A: Cervical **Myelopathy**

Note ""here the Doctor said we have to write the name of the syndrome not only the symptoms)

Q5: WHAT IS THE TREATMENT OF THE PATIENT?2marks

If no Symptoms of the Spinal Cord Compression & Only Local Symptoms of pain..etc > Conservative therapy > NSAIDs & Physiotherapy
If symptoms of spinal Cord compression appears then it's Decompressive surgery

Q1: A patient come to ER he is not opening his eyes and can't talk anything and his total GCS = 6 what is his motor response? 2 MARKS

No eye opening = 1

No verbal response = 1

1+1=2

So his GCS=6 → 6-2= 4

So answer is 4 → flexion withdrawal from the pain would be his best motor response

Note (here The doctor said we should write the full explanation and describe the motor score 4,, not just say 4)

Q2: Ptn. With 35mmhg ICP mention 2 bedside ways to decrease ICP? 3MARKS

- 1- Elevate the Patient's head
- 2- Give Diuretics
- 3- EVD drains are considered a bedside way to decrease ICP
- 4- **I guess anything like sedatives and paralytics are considered wrong since they do not decrease ICP**

Q3: what's the effect of increased PCO2 on Cerebral Blood flow? 3 MARKS

Answer: cerebral vasodilation and it will increase cerebral blood flow.

Q3: Mention the main indication for ICP Monitor placement after head trauma ? 3MARKS

- 1- GCS less than or equal ≤ 8 (3-8) or \rightarrow just say < 9 with loss of consciousness

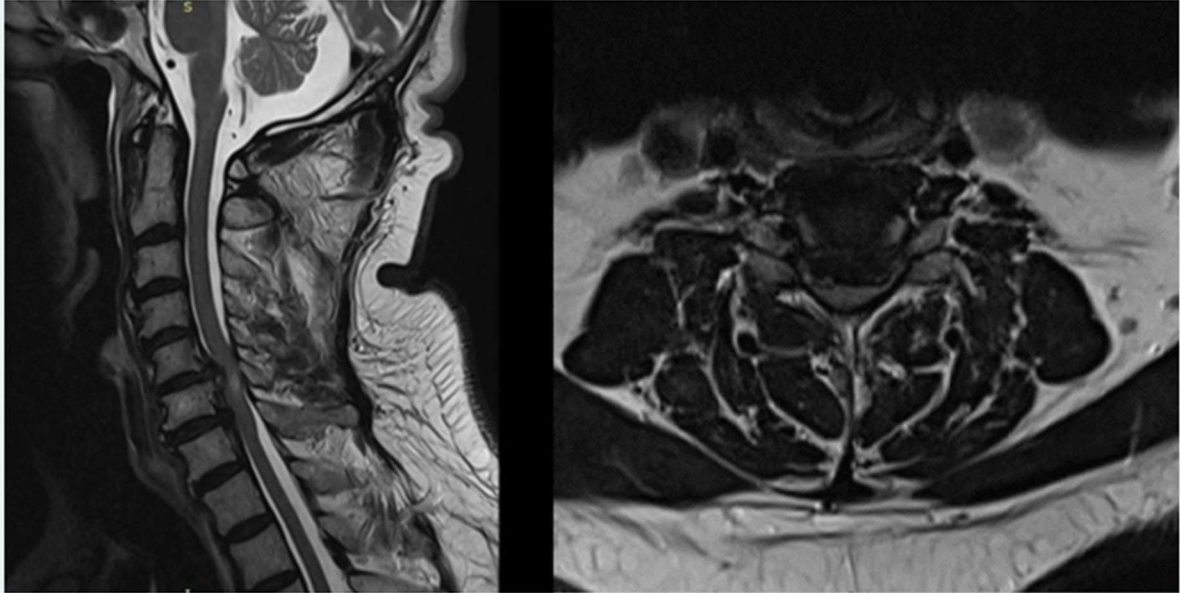
DONE,,,, BEST WISHES FOR U ALL 😊😊

1

59 years old male patient with bilateral lower limb weakness

1- Name the radiological study and the sequence shown?

(2 Points)

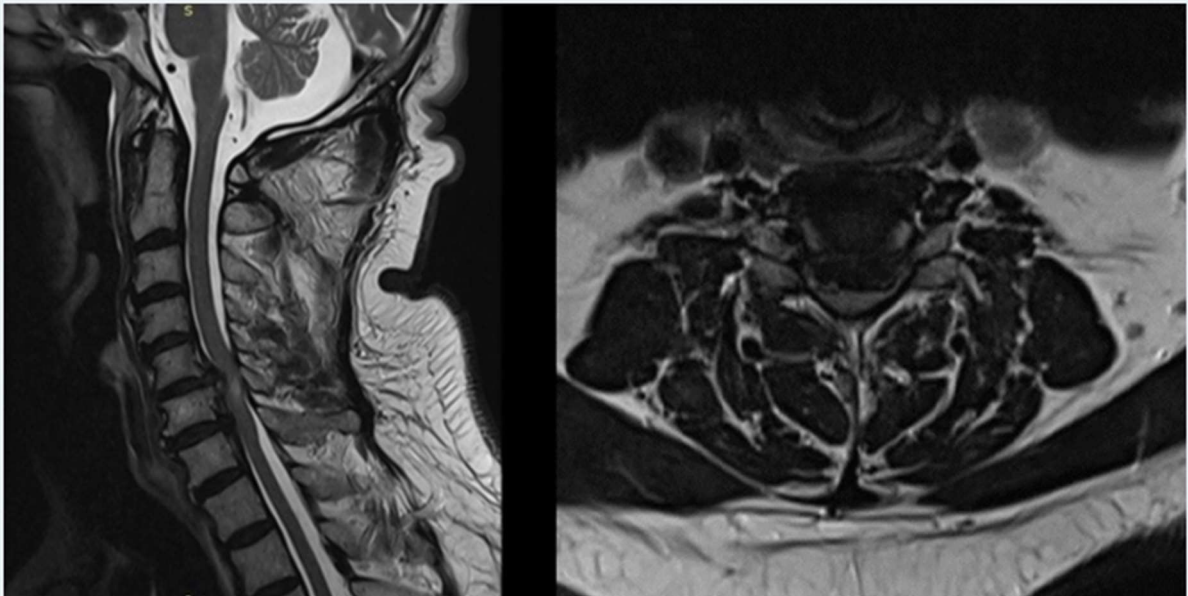


2

59 years old male patient with bilateral lower limb weakness

2- Describe two findings in the MRI scan

(2 Points)

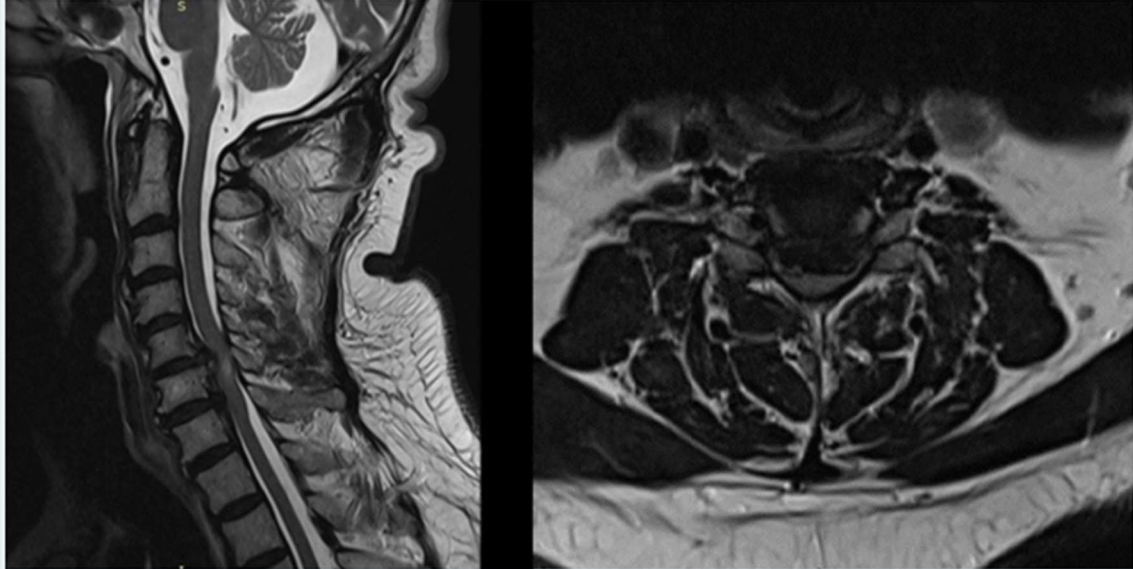


3

59 years old male patient with bilateral lower limb weakness

3- Mention two likely presenting symptoms?

(2 Points)

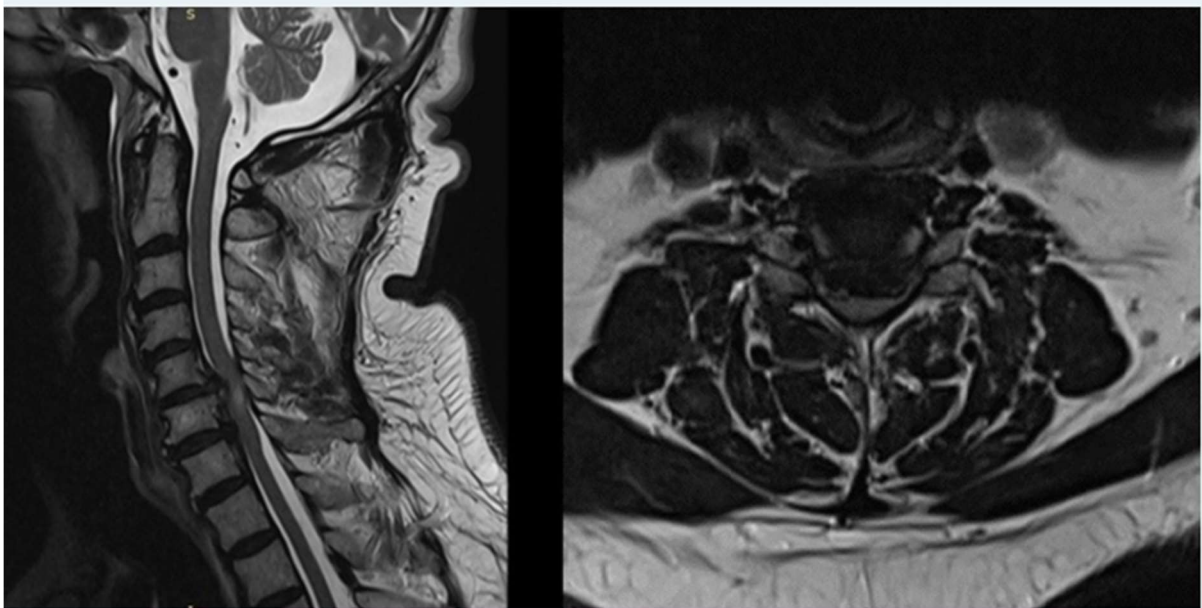


4

59 years old male patient with bilateral lower limb weakness

4- Mention three likely signs on examination?

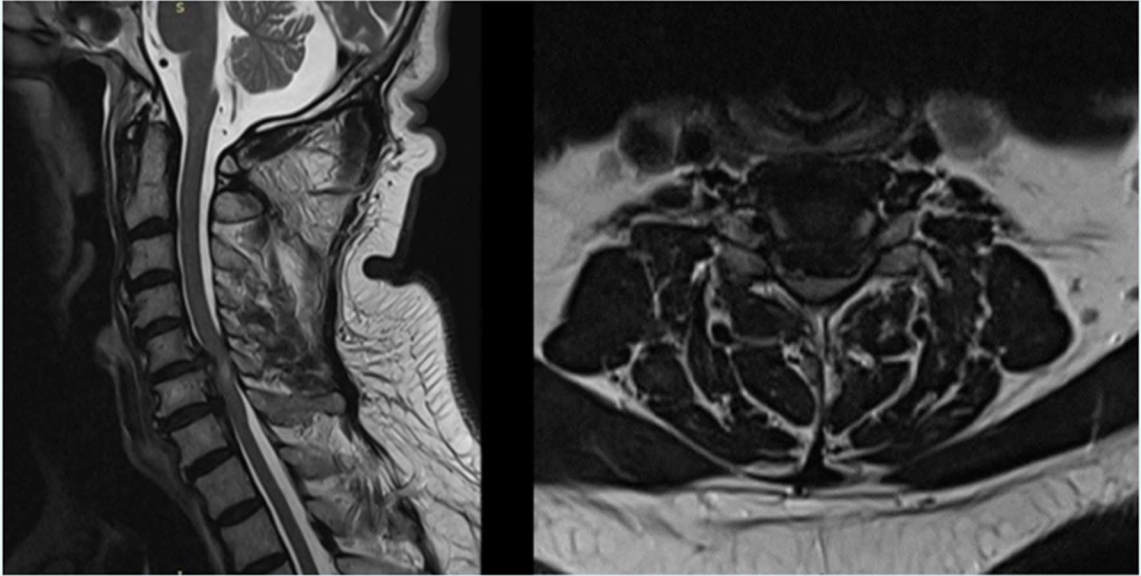
(3 Points)



5

59 years old male patient with bilateral lower limb weakness

5- What type of lower limb weakness you are expecting to find?
(3 Points)



7

This newborn developed a progressive increase in the head Circumference.

2- What is the most likely cause of the increase in the head circumference?
(3 Points)



6

This newborn developed a progressive increase in the head Circumference.

1- What is the lesion depicted in the photograph?
(2 Points)



8

This newborn developed a progressive increase in the head Circumference.

3- Name two signs likely to be associated with this diagnosis for increased head circumference?

(2 Points)



9

This newborn developed a progressive increase in the head Circumference.

4- Name one investigation to confirm your diagnosis for increased head circumference?
(2 Points)



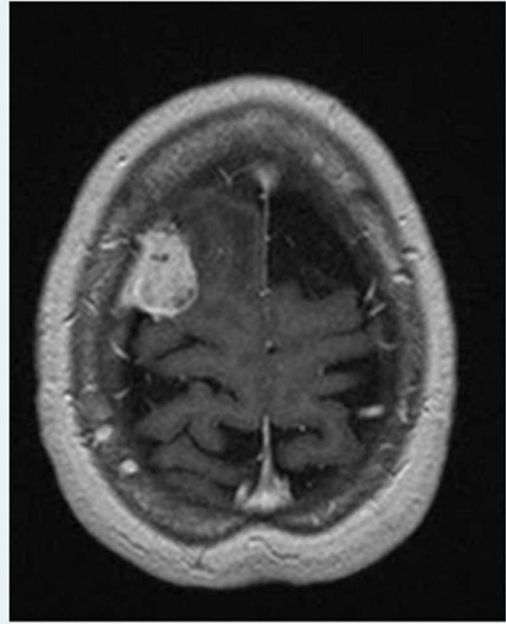
10

This newborn developed a progressive increase in the head Circumference.

5- Name one treatment option for the cause of increased head circumference?
(2 Points)

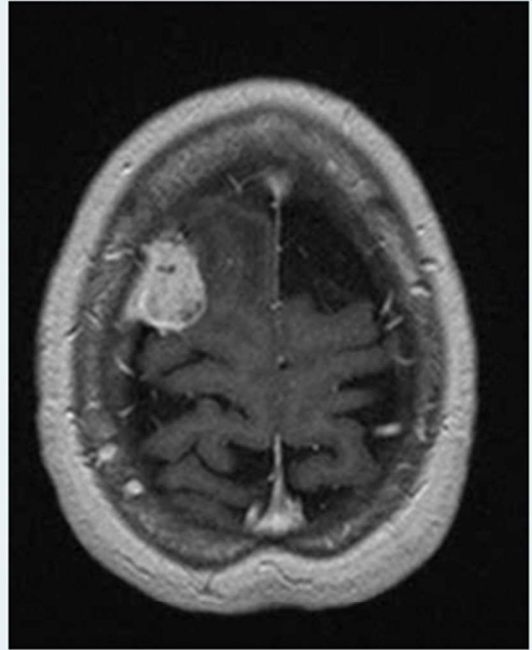


11



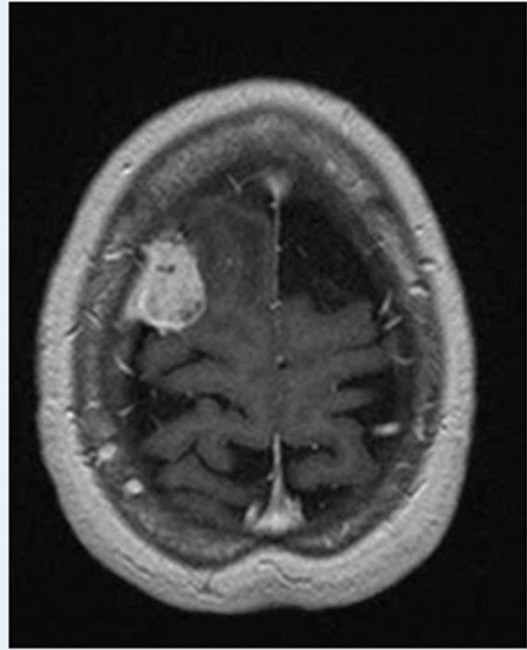
67 years old female patient, presented to A&E with Generalized tonic-clonic seizure

1- Name the study and the sequence depicted?
(3 Points)



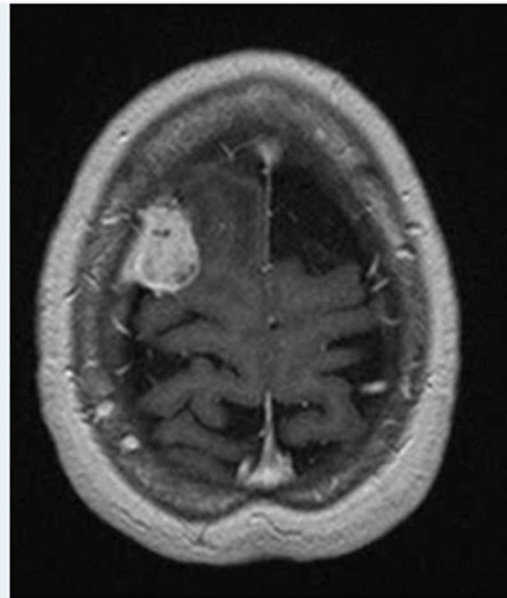
67 years old female patient, presented to A&E with Generalized tonic-clonic seizure

2- Name two drugs that can be used to terminate his seizure?
(3 Points)



67 years old female patient, presented to A&E with Generalized tonic-clonic seizure

3- Mention three symptoms of increased intracranial pressure?
(3 Points)



67 years old female patient, presented to A&E with Generalized tonic-clonic seizure.

4- Mention two possible definitive treatment modalities?
(3 Points)

soul batch

Dr Salem:-

1) A 40 years old man presented to the ER. On examination:- He opens his eyes with pain, makes inappropriate sounds, withdraws from pain.

A- What is his GCS score? 9

B- What is the name of this sign?

Battle Sign

C- What is the cause? Basilar Skull fracture

D- Which nerve is affected?

CNVIII (Because it's associated with hemotympanum)

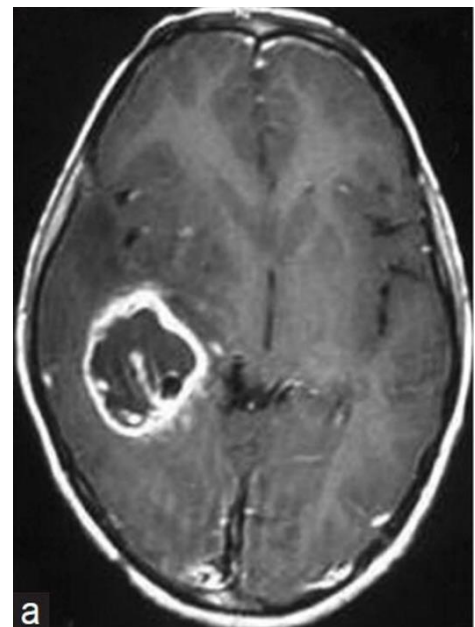


2) Patient presented with weakness in his right arm, he can move his arm against gravity.

A- What is his muscle power grade? 3

B- What is the mechanism of weakness? Compression on the motor area

C- Differential Diagnosis?



3) A patient suffers from back pain for 10 days, what is your next step?

A- CT

B- MRI

C- NSAIDs

D- All of the above

4) All of these are Red Flags for lower back pain except?

A- Insignificant trauma (Answer)

B- Pain not relieved at night

C- Bowel dysfunction.

5) Investigation for Hydrocephalus is?

A- CT Scan

B- MRI

C- Lumbar Puncture

6) All of these warrant urgent surgery except?

A- Severe Pain

B- Urine Incontinence

C- Stool incontinence

D- Foot Drop one year ago

E- None of the above

7) Patient lost his right knee jerk reflexes, he has pain in his right leg and along his right medial malleolus, which nerve root is affected?

KHMC/ Dr Rami:-

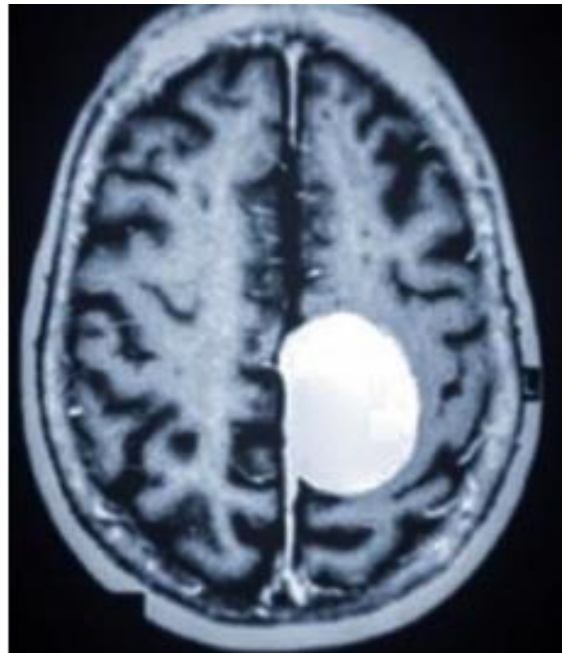
Q1)

1) What is your diagnosis?

Homogenous enhancement lesion near the midline (meningioma)

2) 3 other types of enhancement?

ring enhancement, heterogenous enhancement, Non-Enhancing Lesion



Q2)

1- What type of fracture is this?

Burst Fracture

2- What is your next step? MRI



Q3)

* Production of CSF = 500ml/day

* CPP= MAP –ICP (MmHg)

* cerebral blood flow = 5000

* 15% = 750 ml/min

Q4) Mention six complications of this pathology.

Vasospasm & Ischemia

Hydrocephalus,

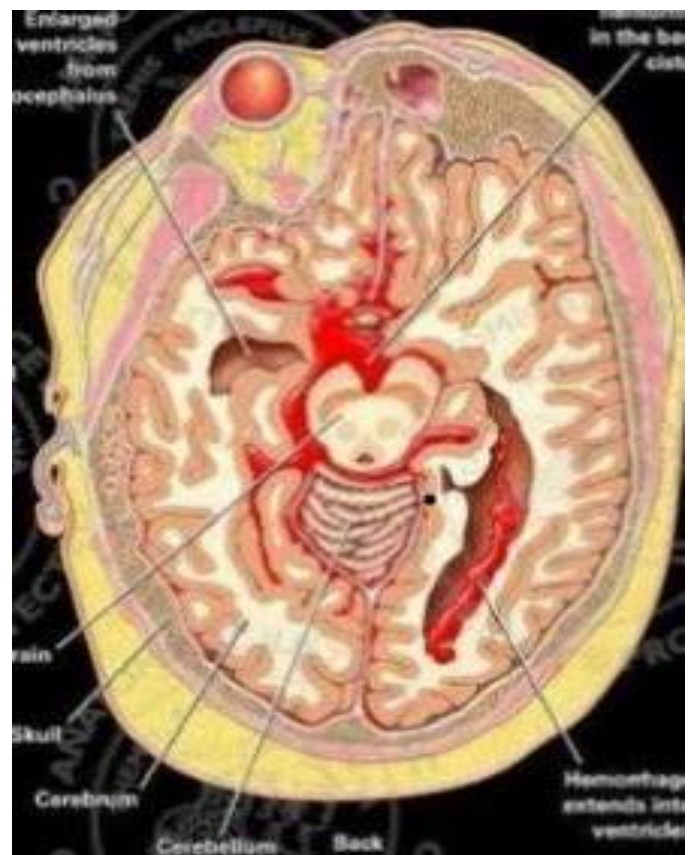
Neurogenic Pulmonary Edema,
Hyponatremia ,

Diabetes Insipidus,

Cardiac Arrhythmias,

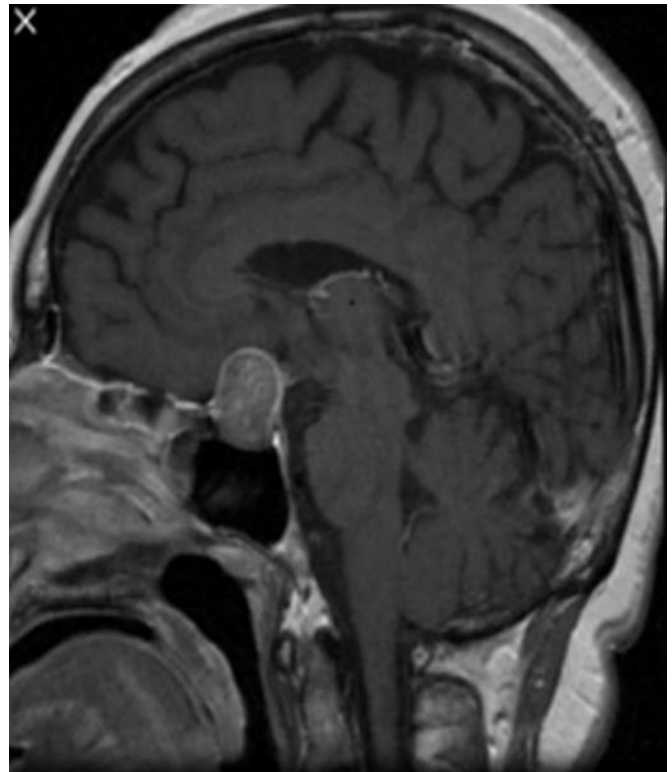
CHF, MI, Infections, Rebleeding,

Seizures



Q5) Mention 4 lesions?

1. Pituitary adenoma
2. Craniopharyngioma
3. Meningioma
4. Optic nerve glioma
5. epidermoid/dermoid cyst



Question 1:

a) Name three indications to do a brain CT scan in patients with head injury in general:

-
-
-

b) Knowing that the CT brain showed no significant findings, the most likely diagnosis is:

-

c) An ICP monitor was inserted, his ICP reading was 30 mmHg, His blood pressure was 90/55 mmHg. What is the patients CPP?

-

d) The GCS of this patient is:

-

Question 2:

a) Name the type of the MRI showed.

-

b) What is the most likely tumor showed on the MRI?

-

c) Name three histopathological subtypes of the tumor showed on the MRI.

-
-
-

d) Name two clinical signs that can be found in such patient:

-
-

Question 3:

a) Name three expected signs that can found in this patient on physical examination:

-
-
-

b) Name two common symptoms in patients with cervical myelopathy.

-
-

c) What is the type of MRI showed?

-

d) Name one type of surgery that can be done in this patient.

-

Question 4:

a) In regards to the classification of spinal tumors, where is the tumor located?

-

b) Name three differential diagnosis .

-
-

Prince hamza hospital

Q1: CT scan Photo “ no findings “

- a) Name three indications to do a brain CT scan in patients with head injury in general?**
- b) Knowing that the CT brain showed no significant findings, the most likely diagnosis is:**
- c) An ICP monitor was inserted, his ICP reading was 30 mmHg, His blood pressure was 90/55 mmHg. What is the patients CPP?**
- d) GCS?**

Q2: MRI Showed a extra axial tumor “ meningioma”

- a) Name the type of the MRI showed**
- b) Most likely tumor?**
- c) Name 3 histopathological subtypes of the tumor showed on the MRI?**
- d) Name 2 clinical signs that can be found in such patient ?**

Q3 : MRI shows herniated disc

- a) 3 clinical signs you can find in physical examination?**
- b) Name 2 symptoms in patients with cervical myelopathy**
- c) Type of MRI showed**
- d) Name one type of surgery that can be done to this patient**

Q4: MRI shows spinal tumor

- a) According to spinal tumor classification, where is the tumor located?
- b) Name 3 differential diagnosis

Dr Alaa (PHH)

Scenario 1

55 years old man, hit his head, fully conscious GCS 15/15 no neurological deficit, this is his CT scan ((epidural hematoma))

1-Indications of CT scan in trauma patients?

2-Describe the findings

Biconvex hyper-dense lesion in the right fronto-parietal area

3-What are the vessels usually involved?

Scenario 2

3 days post op pt presented with fever and rigors, wound is tender, red and hot, vomiting, no neurological deficit

1-What's your diagnosis?

Surgical infection

2-Two blood tests?

CBC (WBC) and CRP

Scenario 3

Pt was confused, open eyes spontaneously, obeys commands

1) Name the structures from the following (bone, pons, sinus, air sinus, blood, ventricles)

2) Glasgow coma scale?

6-4-4(14)

3) What are the causes of the diagnosis (Subarachnoid hemorrhage)

Trauma, AVM, ruptured aneurysm

Scenario 4

Pt presented with hx of right arm pain for 1 year, resolved slightly but there was abnormal sensations on same arm,,

1. Name the investigation

(MRI, T2) 2.

2. Describe the finding

disc herniation level of C4-C5

3. What is the nerve root compressed?

C5

4. What nerve root is responsible for brachioradialis reflex?

C6 5.

5. Name two modalities of treatment?

Surgical, conservative

Q1: What is this lesion?

Intradural intramedullary

***Mention 2dx:**

Hemangioblastoma

Cavernosum

Q2:

A) What is the most common primary extraAxial tumor in adults?

Answer: Meningioma

B) What is the most common tumors that tend to form calcifications?

Oligodendroglioma

Meningioma

Craniopharyngioma

C) most common site of epidermoid cyst?

CBA angle

Q3:

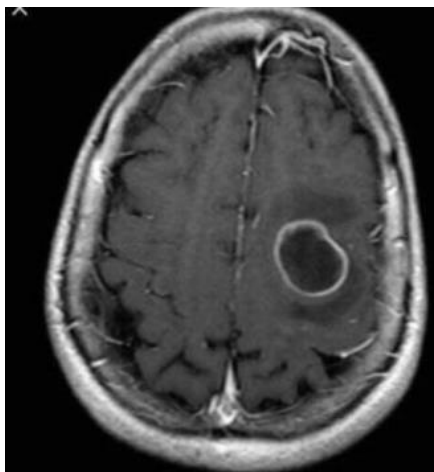
A) What is Acetazolamide

Answer: HCO₃⁻ Anhydrase Inhibitor

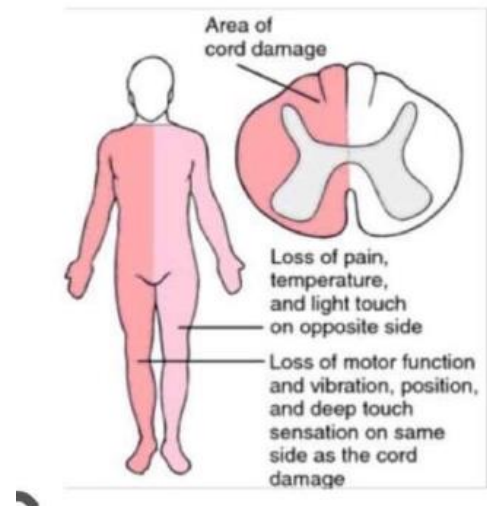
B) What is its neurological use?

In cases of increased ICP

Q4: Give 3 dx of Ring enhancement ?



Q5: describe the following?
Brown Sequard syndrome
And mention the affected tracts



Q6: GCS question, only give number

Q7: There was a pic and they asked what's the procedure, Mention it's uses & complications.

Answer: it's ventricular-peritoneal shunt



Q8: CT of epidural hematoma & what's the definitive treatment? I answered surgery

Q9: A pic of battle sign, what's the cause of this sign & mention other symptoms.

Q10: MRI of lumbar disc

What's the level? L5-S1

What's the surgical indication?

Q1) There was a picture:-

A) What is your diagnosis? Arachnoid cyst

B) Symptoms

C) Treatment

Q2) Protruded Cervical Disc

A) Treatment? B) Symptoms?

Q3) A picture of a tumor,

A) What is the location of this lesion? Suprasellar tumor B) Most common tumor that affects this area is?

Q4) Complication of subarachnoid hemorrhage

Q5) Picture of encephalocele, what is the diagnosis, at what age do you diagnose it?

Q6) A picture with enlarged ventricles, Give 2 differential diagnosis and how do you differentiate between them?

Q7) A picture of a depressed skull fracture.

A) What is your diagnosis

B) Indication of surgery

Neurosurgery Past Papers

لجنة الطب البشري

Q1:

- What Is The Classification Of This Lesion?
- Mention 2 Differential Diagnosis.



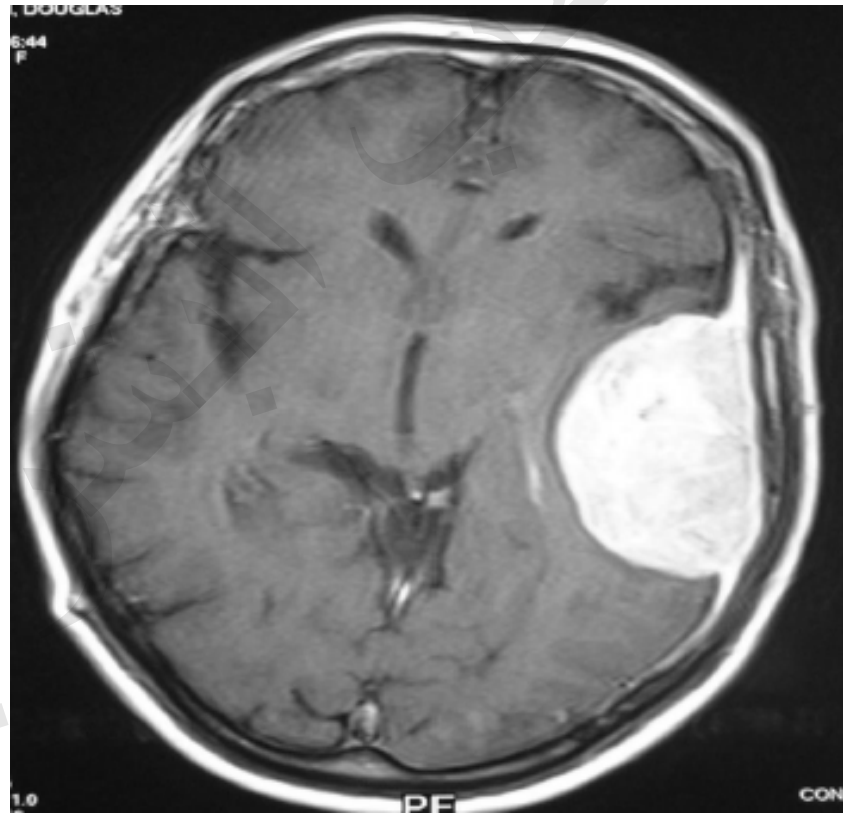
A1:

- Extradural Lesion
- Osteoma / Osteosarcoma

الجامعة الطبية
البيروتية

Q2:

- What Is Your Spot Diagnosis?
- Mention 4 Keywords About This Pathology.

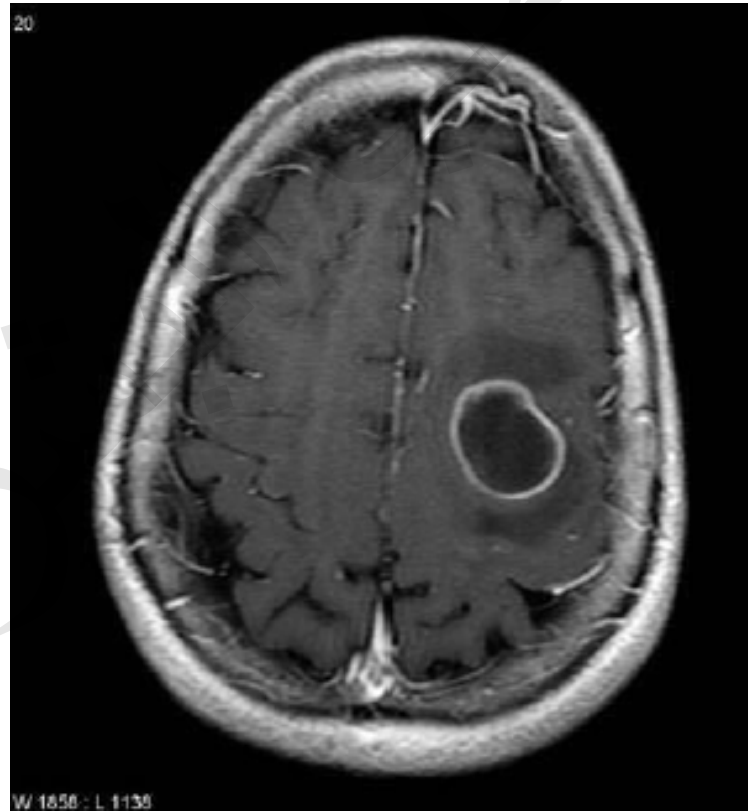


A2:

- Meningioma
- Dural Tail / Homogenous Enhancement / Well-Defined Border / Extra-Axial

Q3:

- What Is The Type Of Enhancement Seen In This Lesion?
- Mention 3 Other Types Of Enhancement.

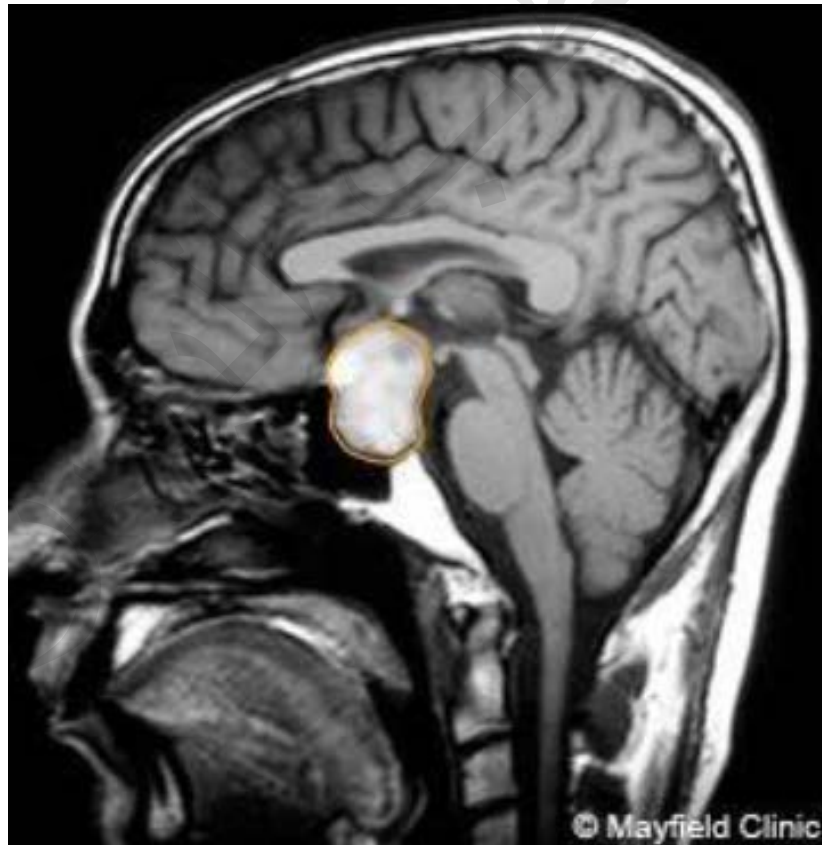


A3:

- Ring Enhancement
- Non-Enhancing Lesion / Homogenous Enhancement / Heterogeneous Enhancement

Q4:

- Mention 4 Differential Diagnosis For This Lesion.
- Mention 3 Effects Of This Lesion.



A4:

- Pituitary Adenoma / Craniopharyngioma / Optic Nerve Glioma / Cyst
- Cranial Nerve Palsy / Bitemporal Hemianopsia / Mass Effect / Endocrine Effect

Q5:

- What Is The Name Of This Pathology?
- What Is Your Management?
- Mention 3 Indications For Surgery In Patients With This Pathology.

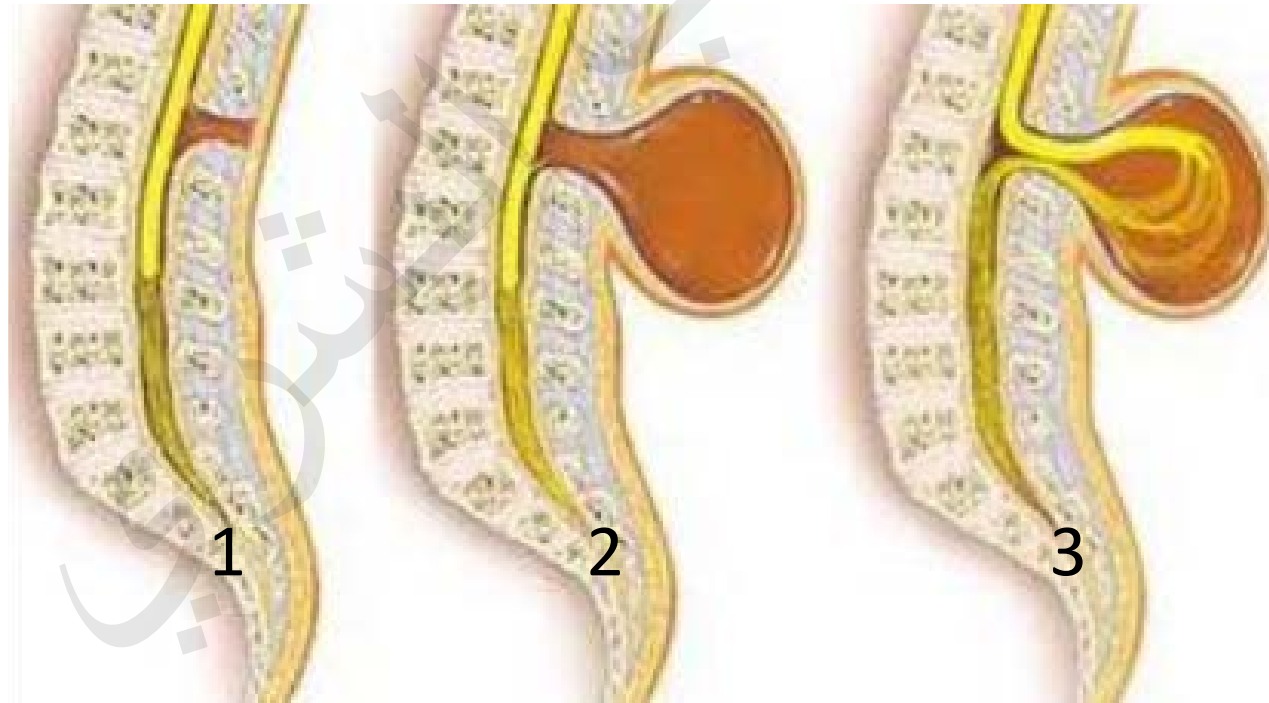


A5:

- Depressed Skull Fracture
- Surgical Elevation (The Fracture Is On The Face --- Cosmetic Reason)
- Cosmetic / Penetrated Dura / Cerebrospinal Fluid Leak / Compression On The Brain / An Open Fracture ...etc.

Q6:

- Name These Pathologies.
- What Is The Management?
- What Are The Goals Of Management For These Patients?

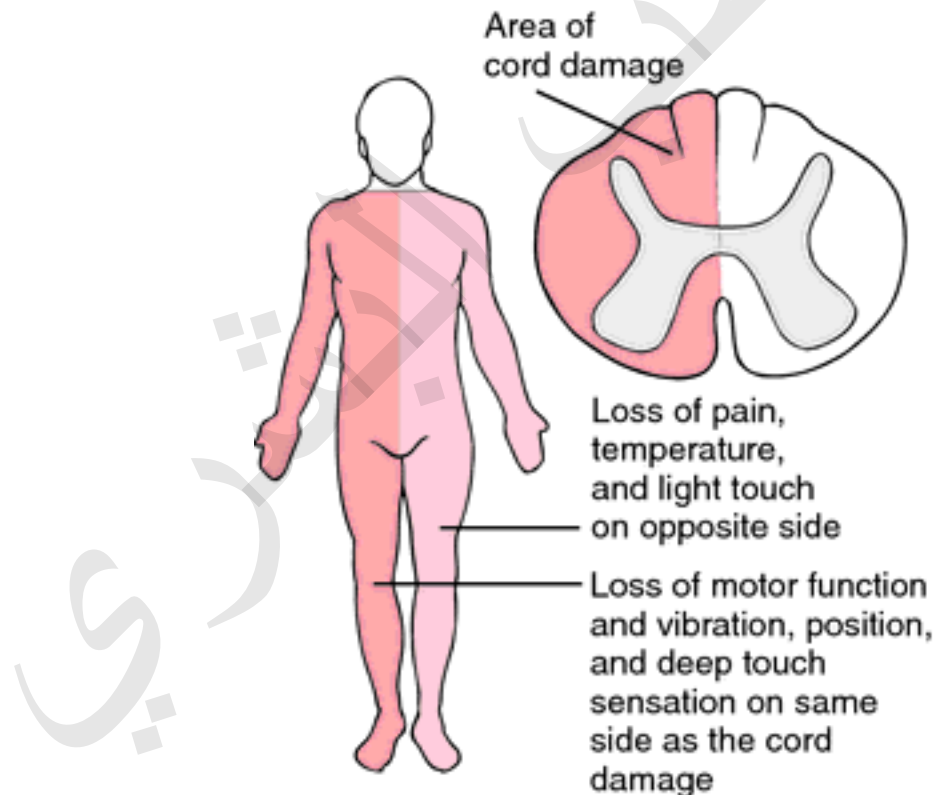


A6:

- 1: Spina Bifida Oculata / 2: Meningocele / 3: Meningomyelocele
- Surgical Removal Of The Sac (Except Oculata)
- Prevent Further Neurologic Damage / Prevent Infections

Q7:

- What Is The Name Of This Pathology?
- Mention 3 Spinal Tracts That Are Affected In This Pathology.



A7:

- Brown Sequard Syndrome
- Spinothalamic Tract / Corticospinal Tract (Anterior & Lateral) / Dorsal Column

Q8:

- What Is The Type Of This Fracture?
- What Is The Next Step In Management?



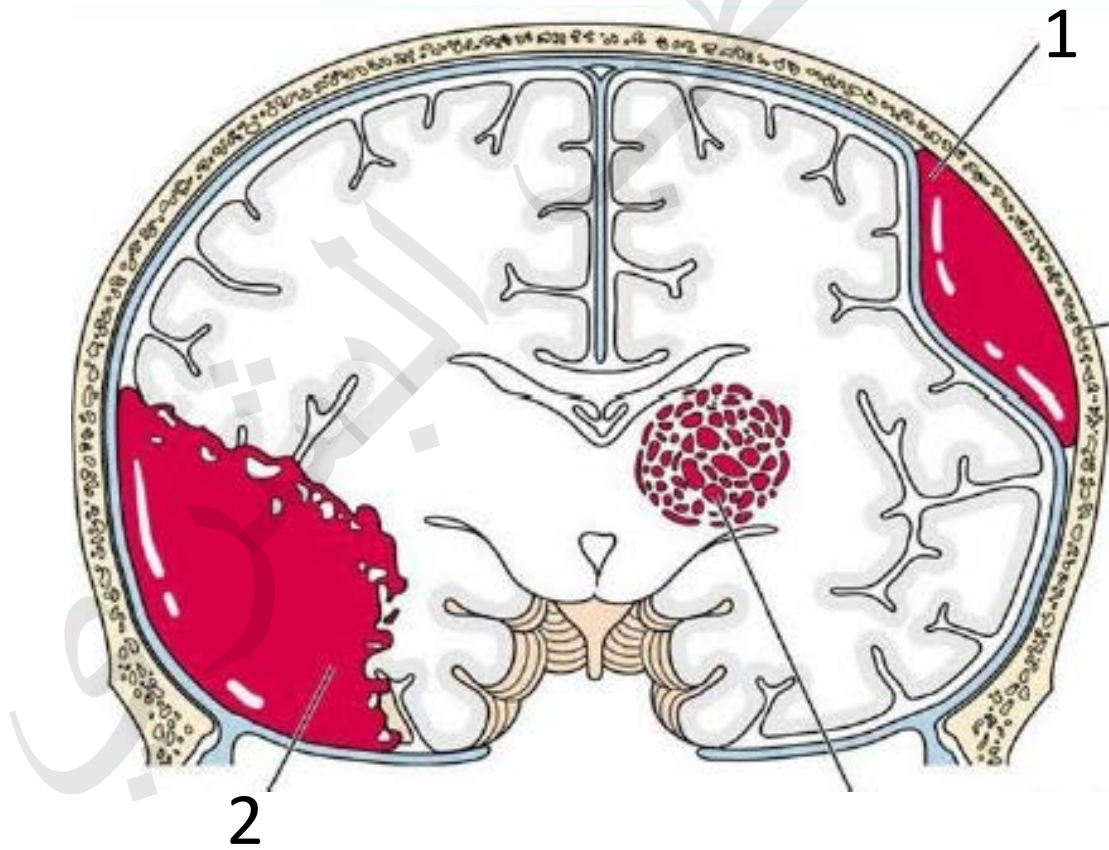
A8:

- Burst Fracture
- There Were Two Answers, We Don't Know Which Is Right:
 - MRI (To See If There Is Any Damage To The Ligaments Then We Can Calculate The TLICS Score)
 - Conservative (Because He Only Has A Burst Fracture Which Is 2 On The TLICS Score & The Doctor Didn't Mention Any Other Signs)

****Important To Know That People Who Score <4 On The TLICS Score Don't Need Surgery (Conservative Treatment), People Who Score 5 Or More Need Surgery, People Who Score 4 Can Undergo Either Surgery Or Conservative Treatment Depending On The Specific Case****

Q9:

- What Is The Type Of Bleeding In 1 & 2?
- Mention The Source Of Bleeding For Each On.



A9:

- 1: Epidural / 2: Subdural
- 1: Mostly Arterial (Middle Meningeal Artery) / 2: Mostly Venous (Bridging Veins)

Q10:

- Mention 6 Complications Of This Pathology.



A10:

- Vasospasm & Ischemia
- Hydrocephalus
- Neurogenic Pulmonary Edema
- Hyponatremia
- Diabetes Insipidus
- Cardiac Arrhythmias, CHF, MI
- Infections
- Rebleeding
- Seizures

****This Is A Subarachnoid Hemorrhage (Fills The Cisterns)****

Q11 36 y/o male presented to ER after RTA ,
according to the picture below answer the
questions :



1) The pt. is open his eye when you asked him to and his answers was inappropriate and he moved his left hand to localize the pain >>

What is his GCS ??

$$3+4+5 = 12$$

2) What is the name of the sign in the picture ??

Raccoon eye

3) What is your diagnosis??

Basilar skull fracture

4) Mention two other signs (**NOT symptoms**) you can find in the pt.

- CSF otorrhoea

- haemotympanum

-Battle's sign—bruising over mastoid bone

Q12 45 y/o female come to the ER after she had a traumatic head injury ,, and when you do CT scan to the head >> you see this picture



1) What is your diagnosis (Not describe the lesion) ??

ACUT Sub dural hemorrhage **in the Rt. Frontoparietal lobes**

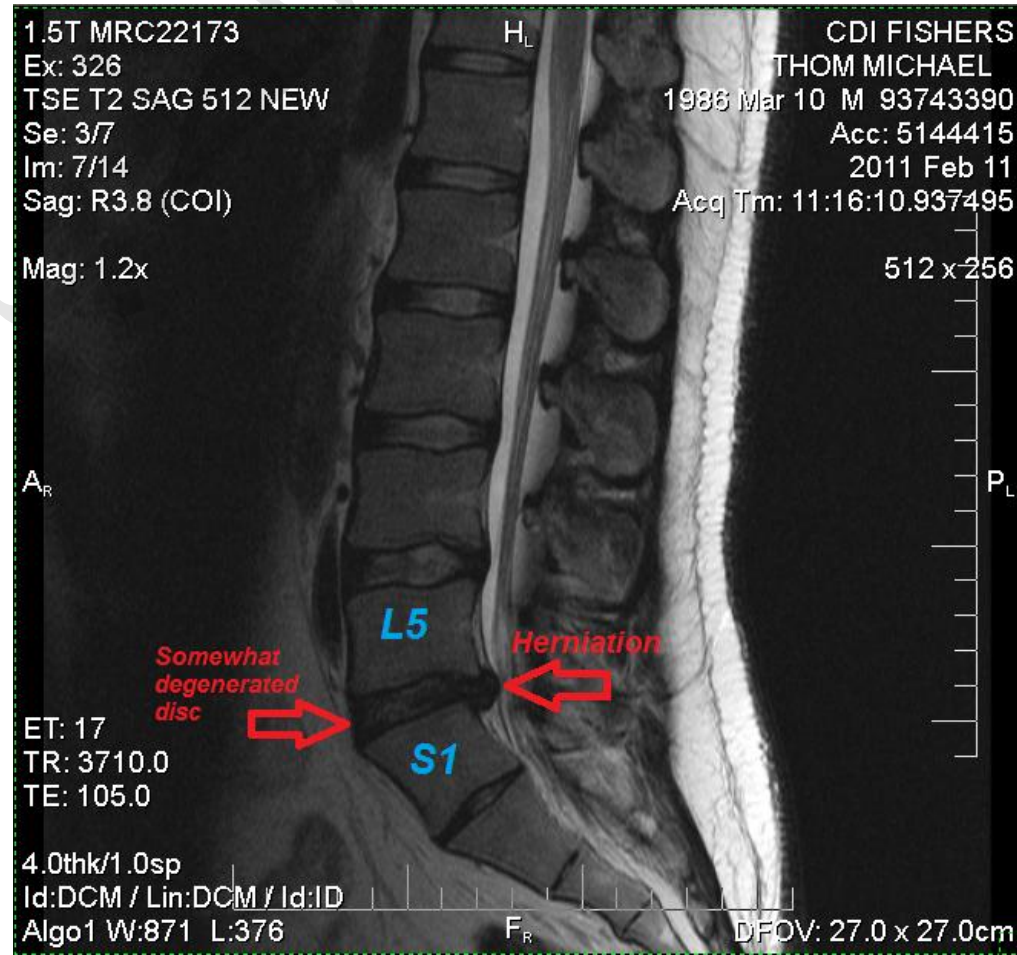
2) 2 sources of bleeding ??

- from rupture of a bridging vein
- focal tear of a cortical artery

3) 3 indication for surgery ??

- Any neurological deficit
- **Maximal** thickness > 10 mm
- **Maximal** volume > 30 cc
- Midline shift > 5 mm

Q13 48 y/o male come to your clinic ,, complaining from a lower back pain radiating to the posterior thigh extending to posterior aspect of the leg and the sole of the foot >> you ordered MRI and it is illustrated in the picture below



1) The pt can only plantar flex his foot against gravity >> What is his power score ?

>>> 3

2) Which nerve root is affected ??

- S1

3) Mention 2 signs (**not symptoms**) you can find in physical examination ??

- Any sign related to S1 radiculopathy

- Hyporeflexia in ankle reflex
- Loss of fine sensation over the plantar aspect of the foot

4) Mention 3 indication for surgery ??

- Pain last for more than 6-12 weeks
- Any neurological deficit
- Urinary incontinence (OR other red flag)

Q14 According to spinal tumors ,, answer the question below

1) What is the most common spinal tumor ??

- Metastasis

2) Mention 3 common extramedullary intradural spinal tumor ??

- Schwannoma

- Neurofibroma

- Meningioma

- Malignant peripheral nerve sheath tumors

Q15 36 y/o male come to ER after RTA and when you do CT scan to his head you find him has a subarachnoid hemorrhage

1) What is the next radiological test you want to do ??

- Angiography

2) Mention 3 medication you give to him ??

- Ca channel blocker to prevent vasospasm
- Relief of headache by codeine
- Mannitol
- Laxative
- phenytoin to prevent seizures

3) Mention **2 important** risk factors ??

-HTN

-Smoking

-Family hx of genetic disorder (**NOT** to say the name of the genetic disorder)



What is the diagnosis?

Epidural hematoma

What is the management?

- صورة فيها أنواع ال spinal tumors وبطلب شو تصنيفهم ومثال على كل واحدة

- What is the diagnosis? Lumbar meningocele
- What is the management?



- What is the diagnosis? Hydrocephalus
- What are the causes?
- What is the management?



- What can you see in this picture? Dilation of the ventricles
- What is the diagnosis? Hydrocephalus



- What is the diagnosis? Disk prolapse at L4/L5
- When does this case become an emergency?



ملاحظة

- الدكتور في امتحان ال MiniOSCE يركز على المواضيع المهمة
كلينيكال و ما يجيب نظري و اغلب الاسئلة بحكيها بالمحاضرة و بقول هاد
الاشي مهم و بدي اياكم تطلعوا من هالمائير بتعرفوه و لو كنتوا مداومين
طوارئ تقدرؤا تميزوه ... هاي الاشياء ركزوا عليها بالامتحان
- و الامتحان أسئلته سهلة مشان هيك الدكتور بخلي التصليح دقيق و بده
كلمة تكون موجودة مشان يعتبره صح و بحكي ما عنده نص جواب يا
جواب كامل يا لا