



PBL-1 NEUROSCIENCE

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CASE (1)

- A 27 year old female patient
Complaining of **HEADACHE**

.Duration

.Progression

.Nature

.Aggravating factors & relieving factors

.Associated symptoms



PATHOPHYSIOLOGY

- Stretching of pain sensitive structures in the cranium or adjacent structures

.Dura matter

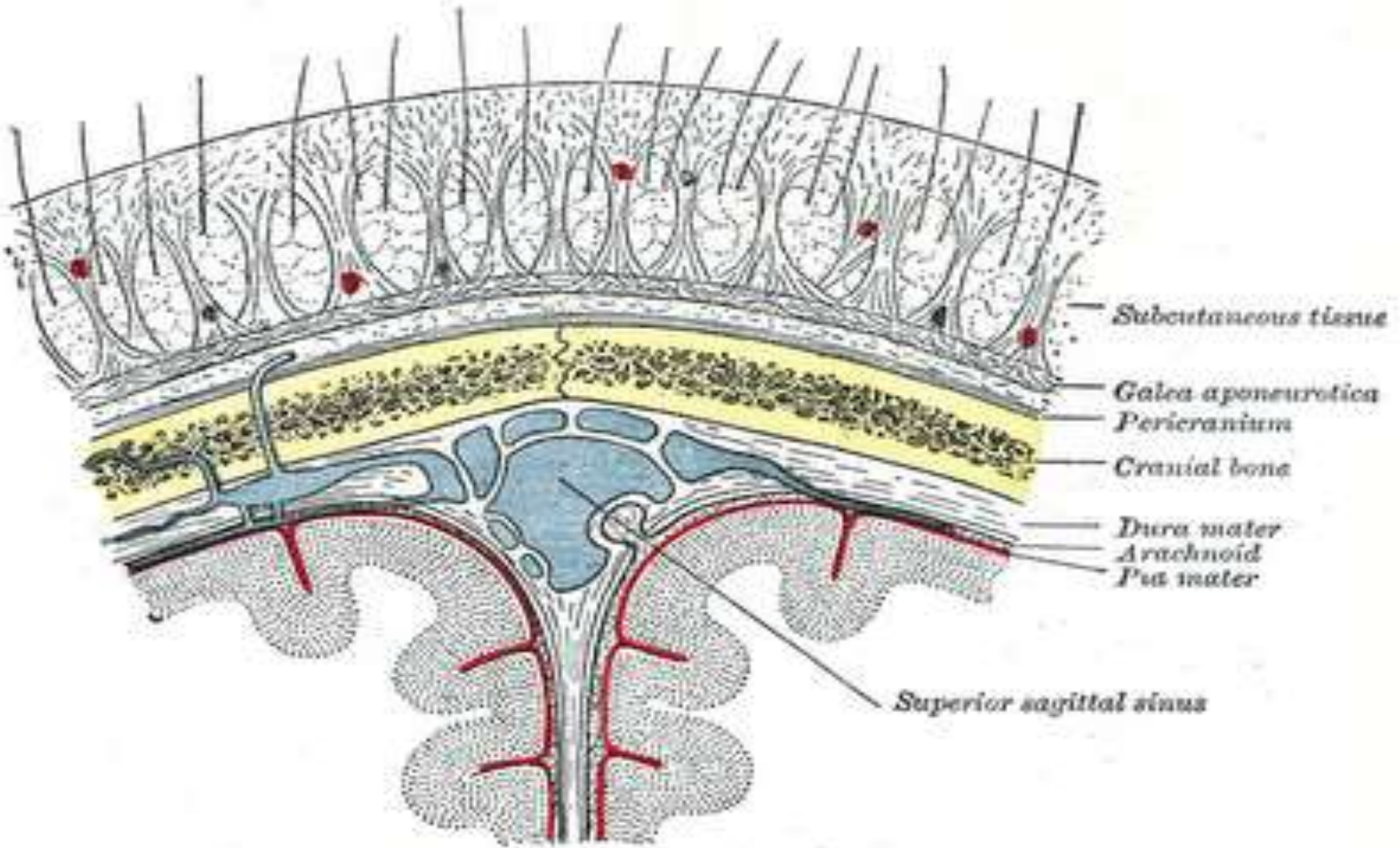
.Periosteum

.Vessels

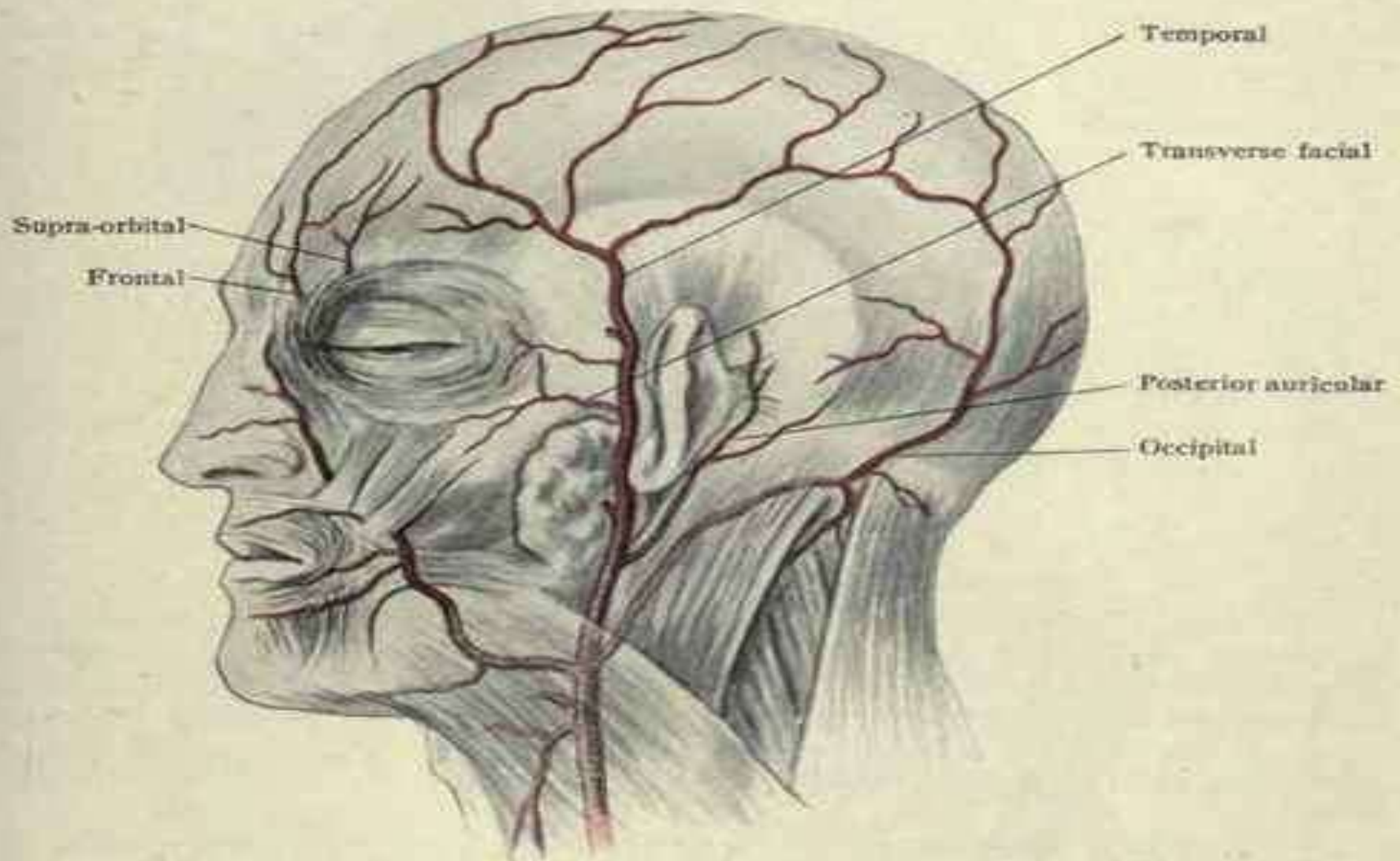
BRAIN TISSUE IS NOT SENSITIVE TO PAIN



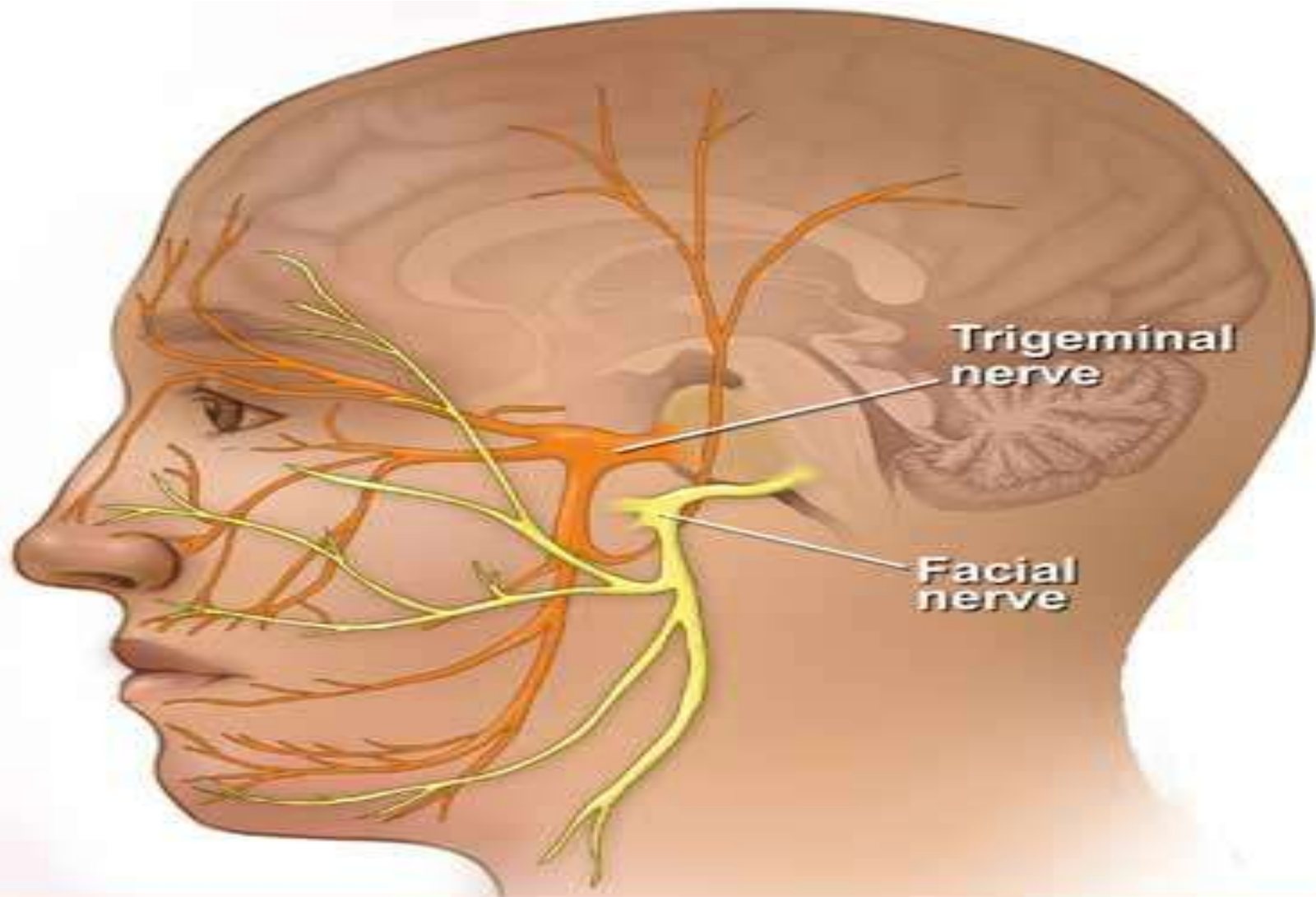
LAYERS.....



ARTERIES



FACIAL SENSATION



REMEMBER...

You look for diagnosis!!!!

Diagnosis will lead to....

MANAGEMENT & PROGNOSIS

WHAT DO I NEED FOR DIAGNOSIS????



STEPS.....

.Knowledge

.Clinical history

.Clinical examination

.Investigation

.Diagnosis or Differential diagnosis

.Management



TYPE OF HEADACHE

- Primary:

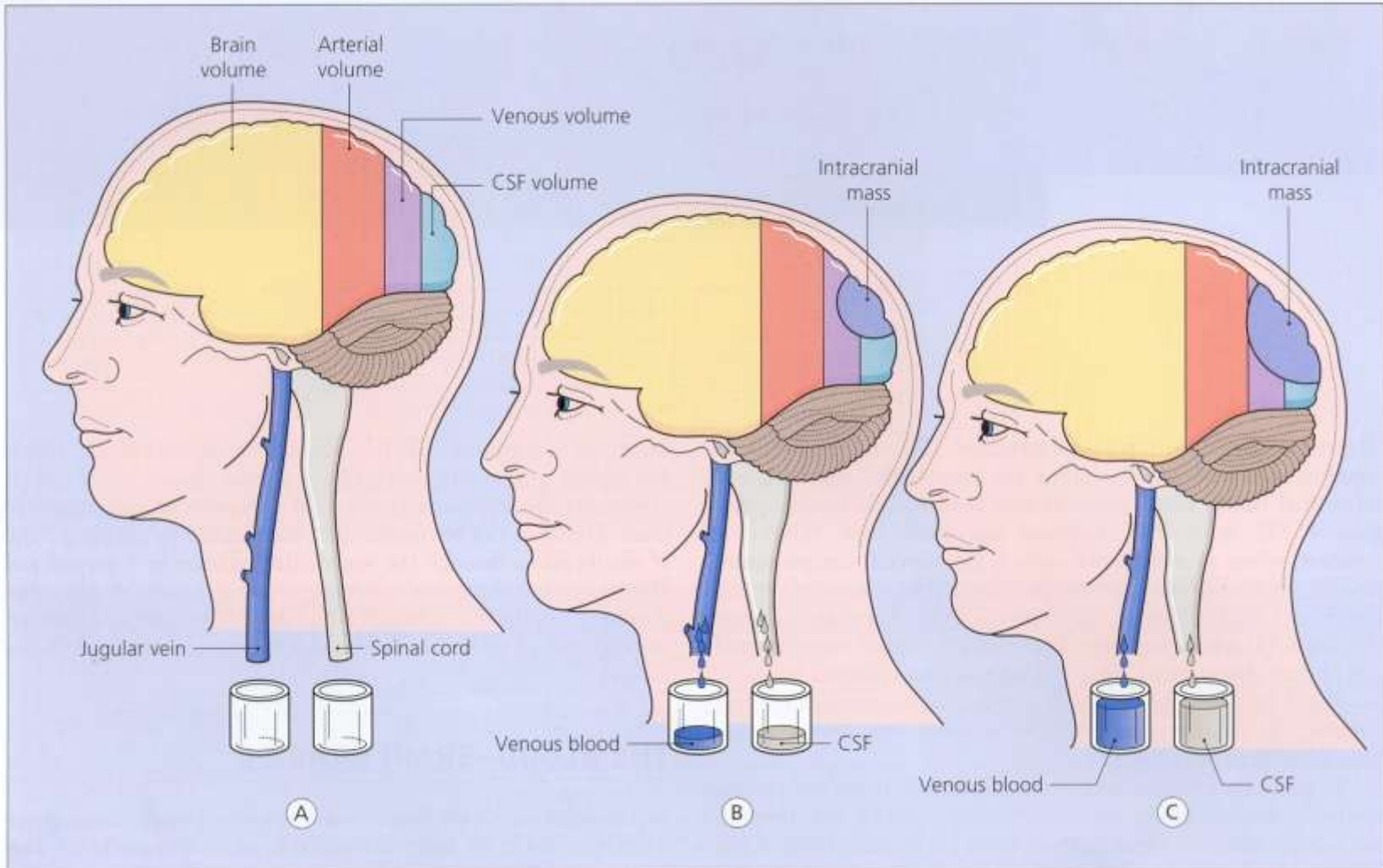
Migraine, Tension, Cluster

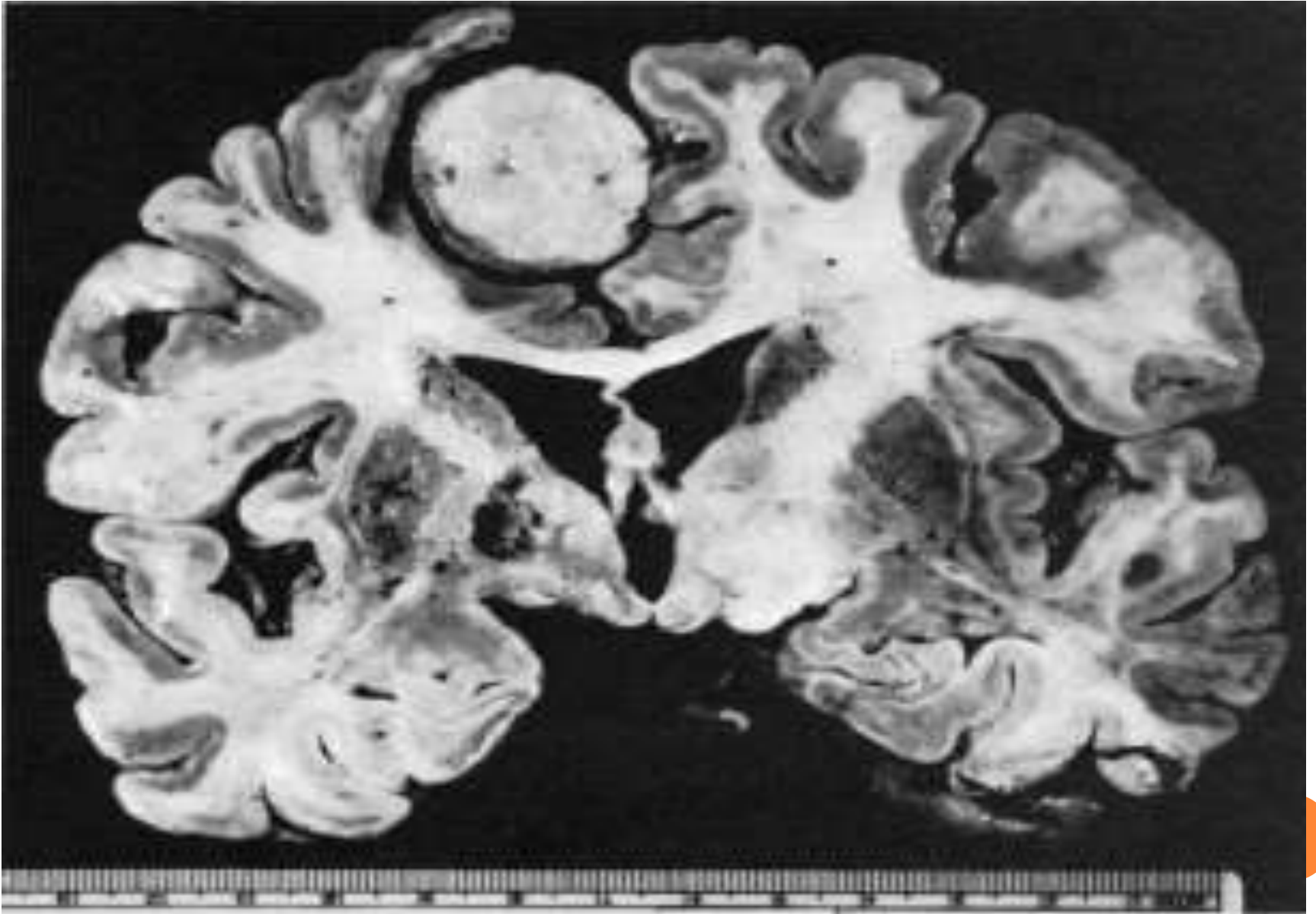
- Secondary:

Space occupying lesions, Infections , Vascular



INTRACRANIAL PRESSURE





STRETCHING PAIN SENSITIVE STRUCTURES

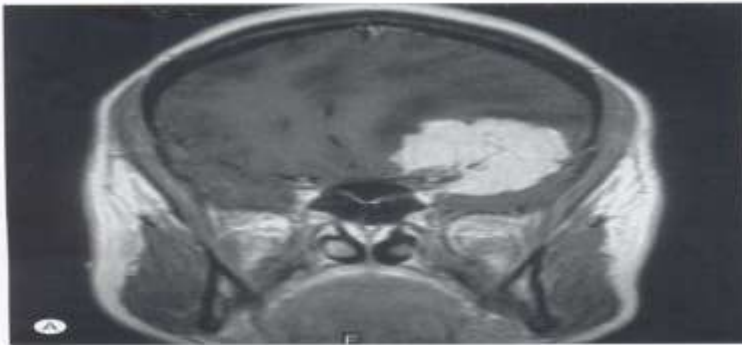


Figure 32.21 Coronal (A) and sagittal (B) MR images of a medial sphenoid ridge.



Figure 32.22 Encasement of the carotid artery by a medial sphenoid wing meningioma.

session to intracranial targets. Radiosurgery is frequently used for meningiomas, where "tumor control" has typically been defined as lack of significant further growth post-radiation or no post-radiation resection required. Radiosurgery can promote tumor regression but does not eradicate meningiomas.^{9,10} Although indications for radiosurgery continue to evolve, it is considered in appropriately-sized meningiomas that are inoperable, residual, and nonresectable, and in recurrent inoperable tumors. For benign meningiomas, fractionated external beam radiation is thought to

be helpful in palliating inoperable tumors, residual nonresectable tumors, and recurrent nonresectable tumors that are too extensive for radiosurgery.

Multiple medical regimens have been investigated in meningioma treatment. Anti-hormonal agents such as mifepristone (RU486) and tamoxifen have been used, however tumor sizes generally stabilized with few partial responses and no complete responses.^{11,12} Studies with hydroxyurea and interferon- α 2B similarly suggest that these drugs may be used to stabilize tumor

SPACE OCCUPYING LESIONS



Figure 32.10 Local spread of a meningioma into adjacent skull base structures.

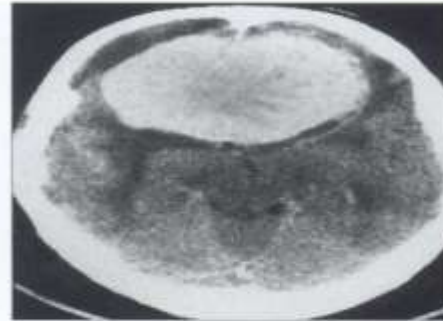


Figure 32.11 Contrast-enhanced CT scan of a typical benign meningioma.

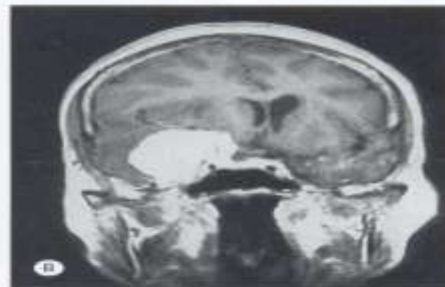


Figure 32.12 Gadolinium-enhanced MR image of a medial sphenoid wing meningioma in axial (A), coronal (B), and sagittal (C) planes.

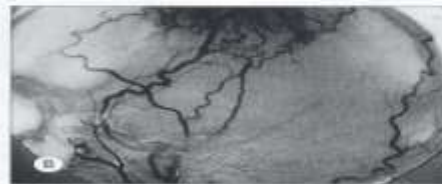


Figure 32.13 Magnetic resonance angiography can demonstrate arterial constriction or displacement as well as tumor vascularity, such as this dilated left middle meningeal artery (A). External carotid angiogram of a meningioma demonstrates a classical sunburst pattern (B).

CLINICAL HISTORY

- Age

Pediatric, Young, Elderly

- Gender

Male, Female

- Duration

Acute, Chronic

- Relieving factors

Analgesia, position, Rest

- Nature

description, diffuse, localized



PHYSICAL EXAMINATION

- General Examination

Rule out adjacent structure problem

- Neurological Examination

Rule out focal neurological deficit

Secondary causes



INVESTIGATION

- Lab test
- Radiological(X-ray, CT ,MRI ,Angiogram)
- Specific neurological Investigations

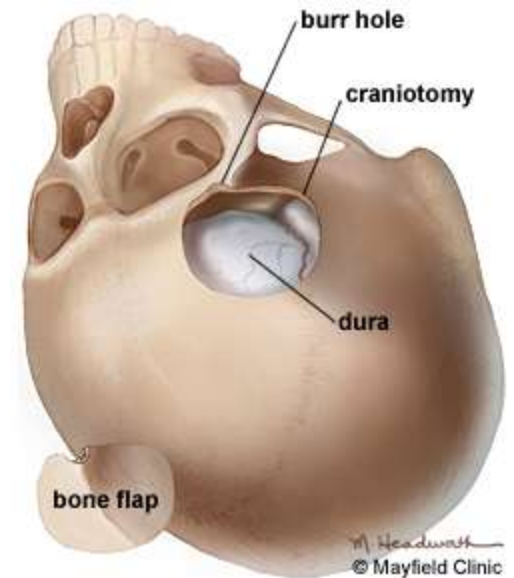


MANAGEMENT

- Primary Vs Secondary
- Treat underlying cause
- Treat by- Simple analgesia
 - Life style modification
 - Other level of analgesia or type specific medications



CHOICES.....



THANK YOU.....

