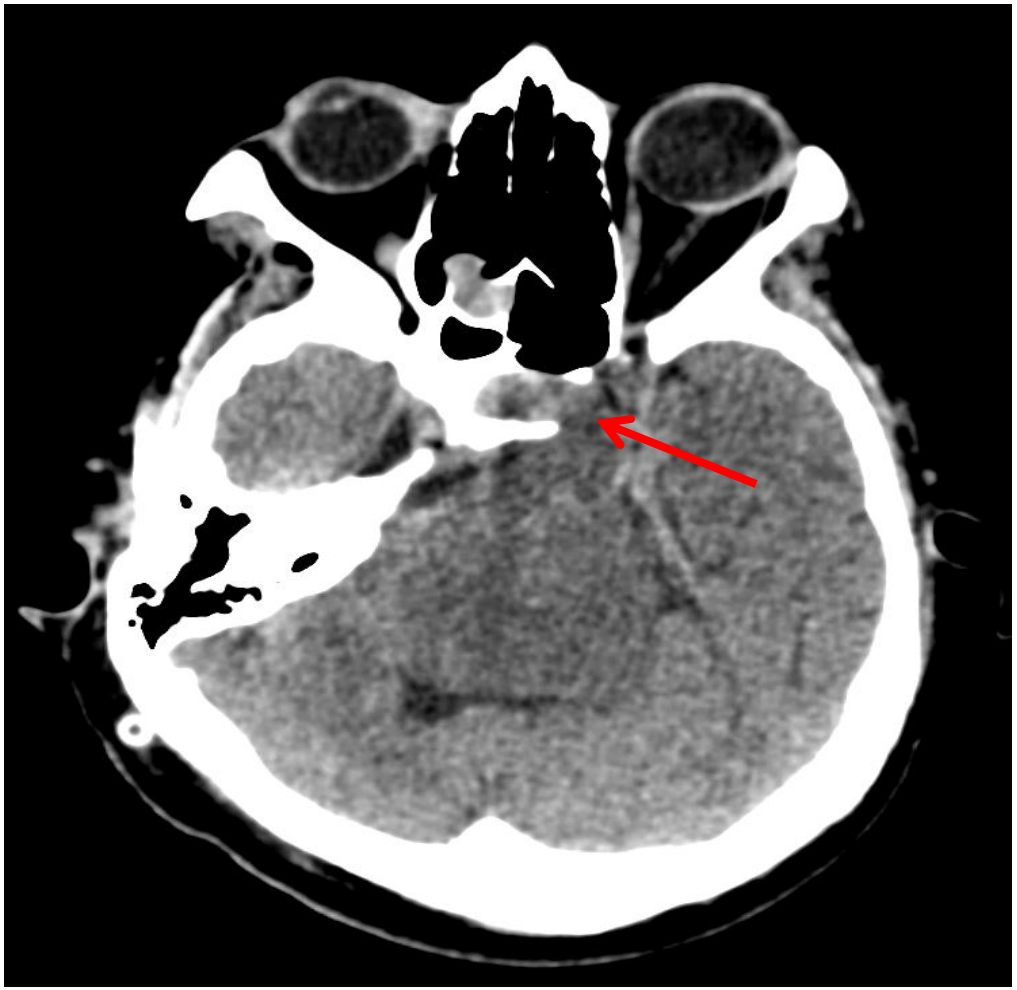
A surprise in Meckel's cave

Dr Vivek D Kharolkar
Assistant Professor
Grant Government Medical college and
Sir JJ Group of hospitals

CLINICAL HISTORY

- A 27 years old female presented with weakness of all four limbs and slurring of speech since 15 days
- Insidious in onset and gradually progressive in nature
- Slurring of speech; insidious in onset
- No history of head injury/loss of consciousness
- No significant family history

CT SCAN



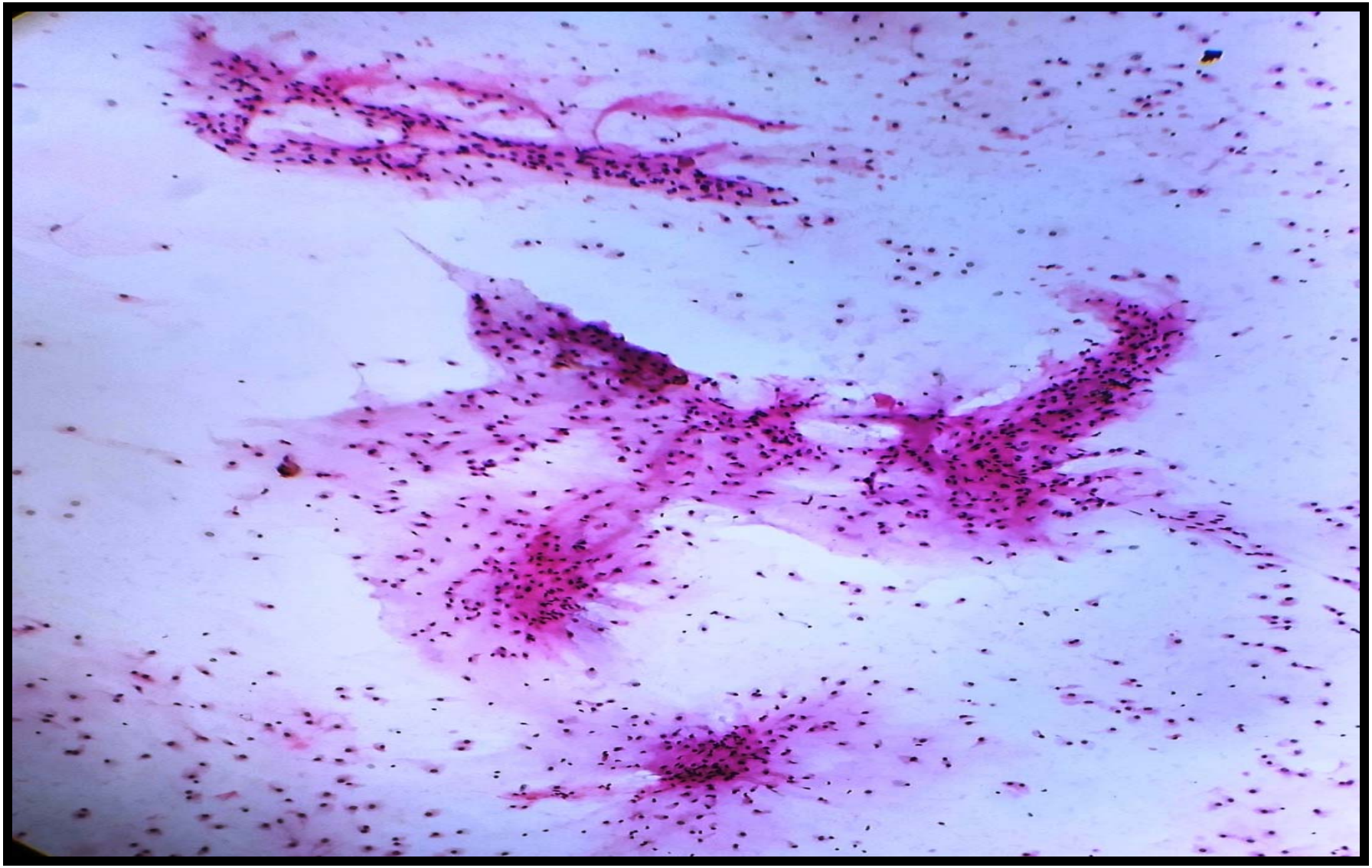
CT SCAN

CT SCAN

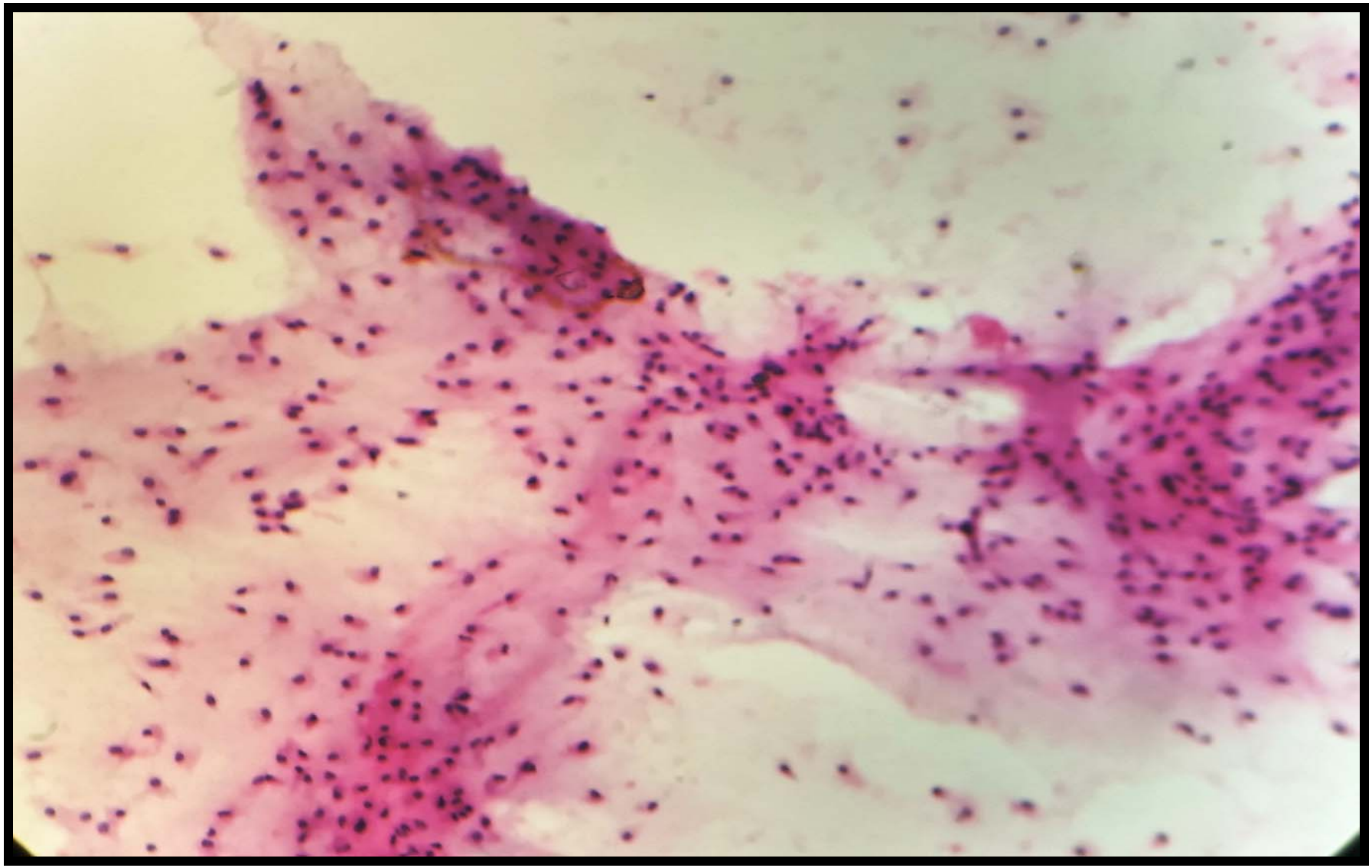
MRI

- Large well defined lobulated altered signal intensity mass lesion
- Around the left Meckel's cave with extensions into the left cavernous sinus, posterior fossa and infratemporal fossa
- Mass effect on the brainstem leading to obstructive hydropcephalus
- Findings likely suggestive of tricompartmental left trigeminal schwannoma

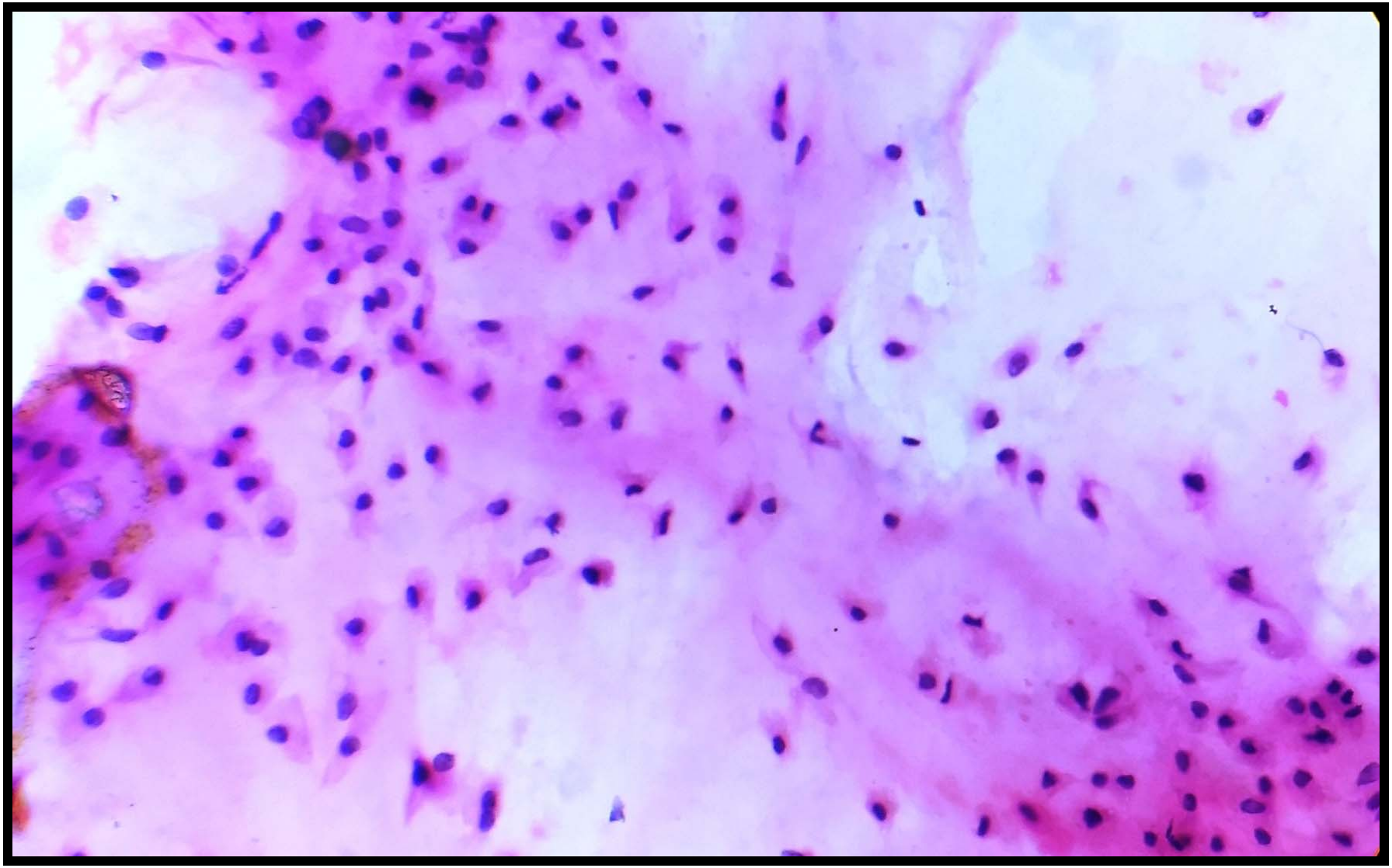
SQUASH CYTOLOGY



SQUASH CYTOLOGY



SQUASH CYTOLOGY



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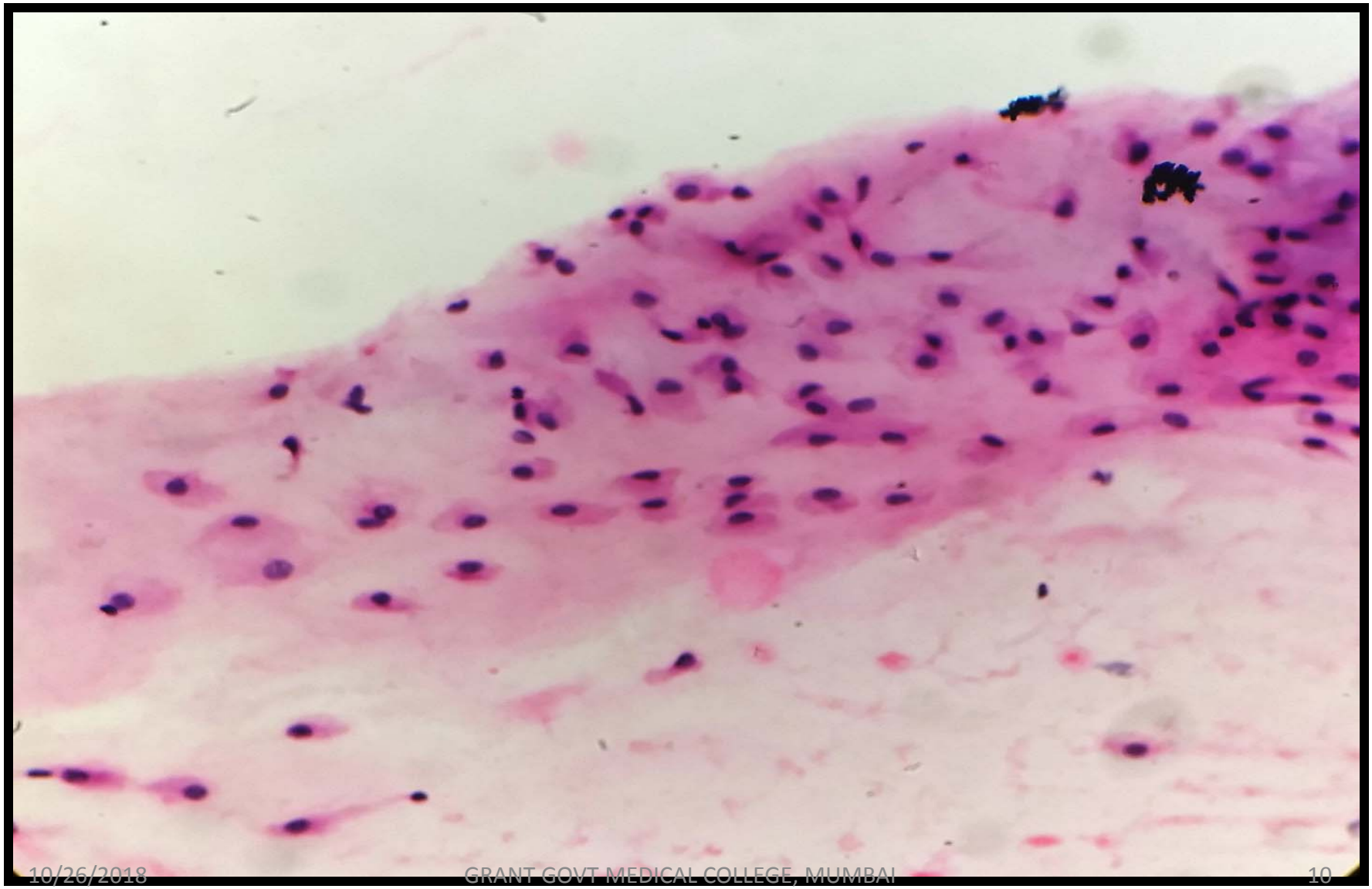


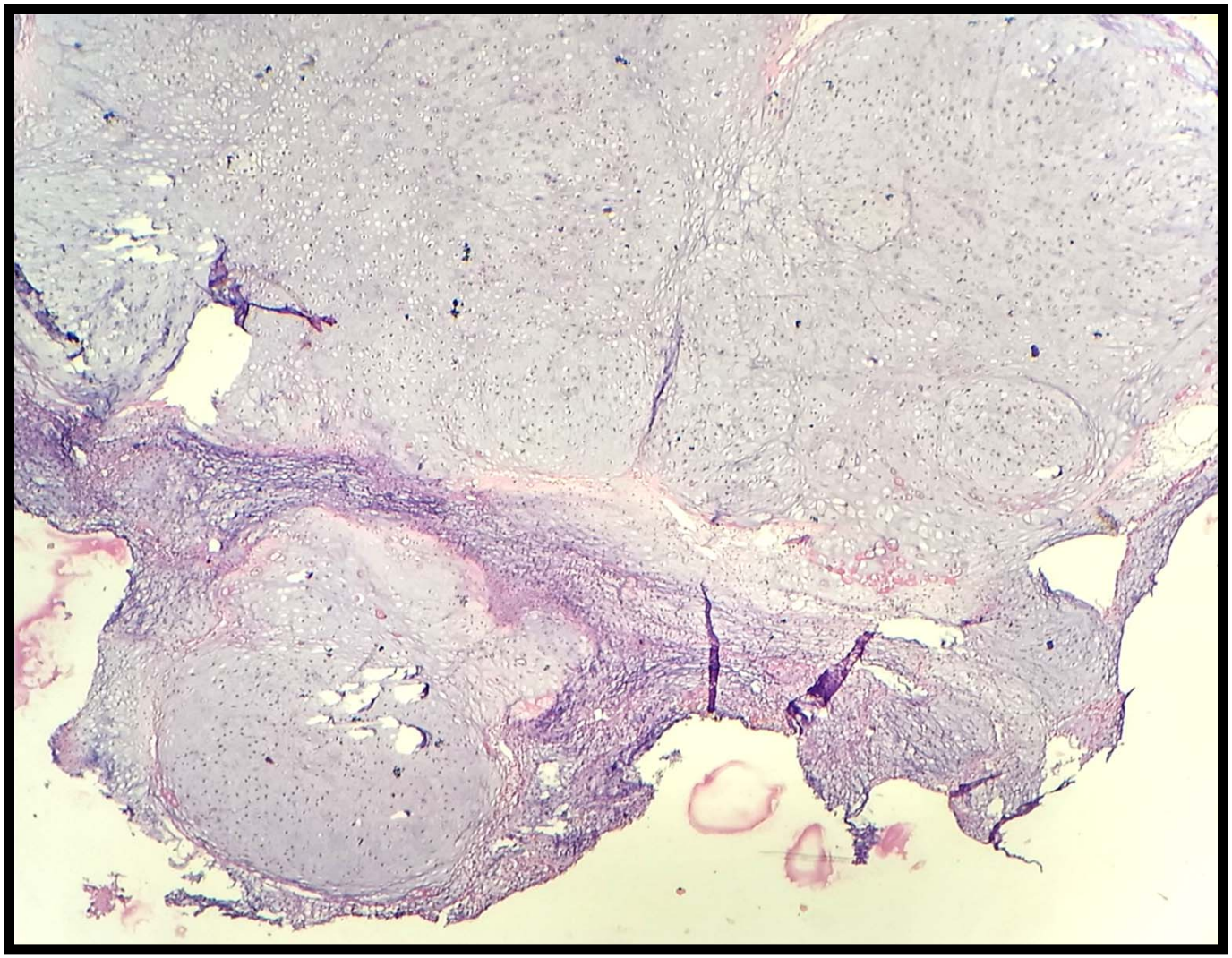

DEF
ABC
GHI
JKL
MNO
PRS
TUV
WXY

Intra-operative Opinion

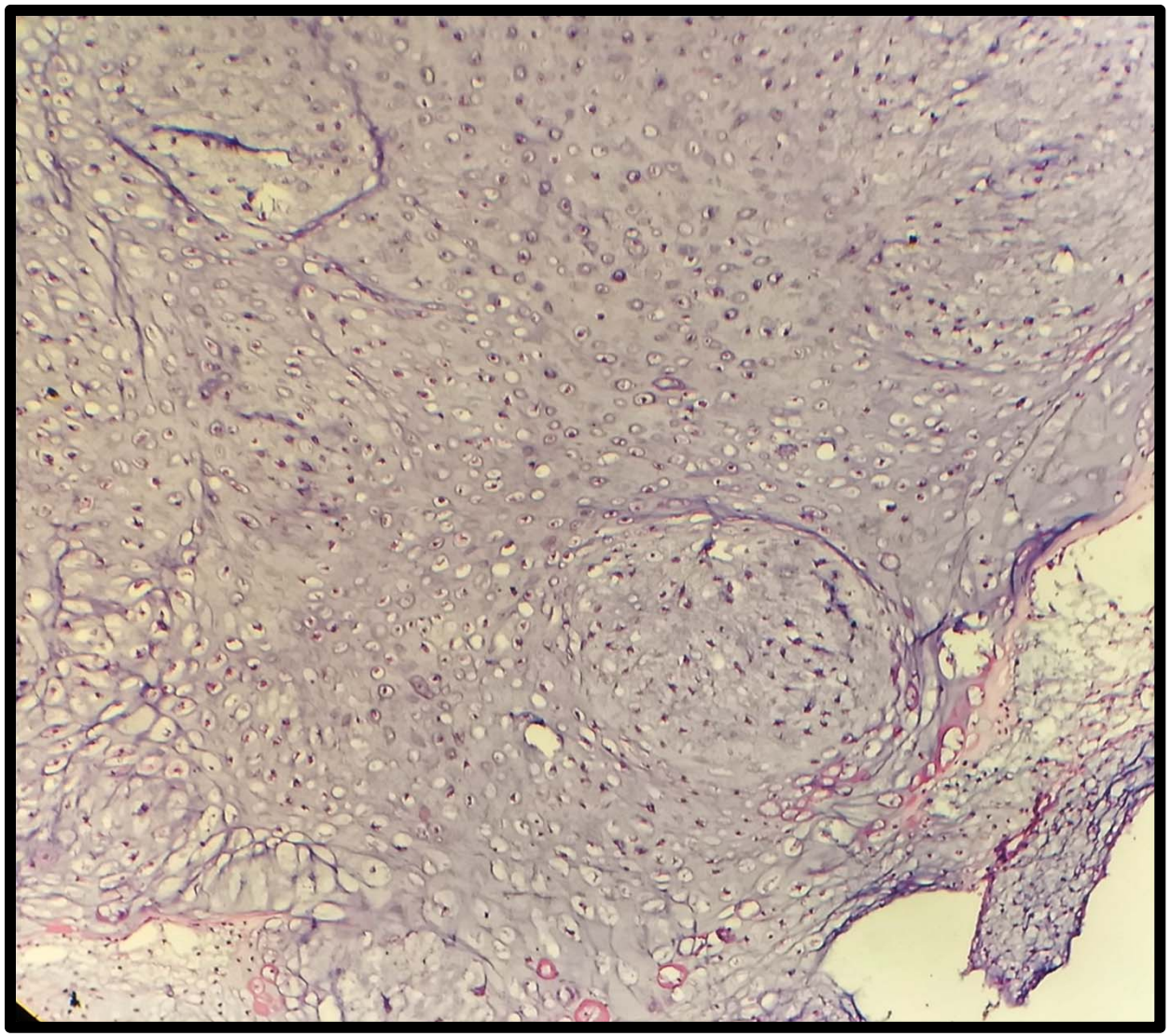
- Schwannoma

HISTOPATHOLOGY

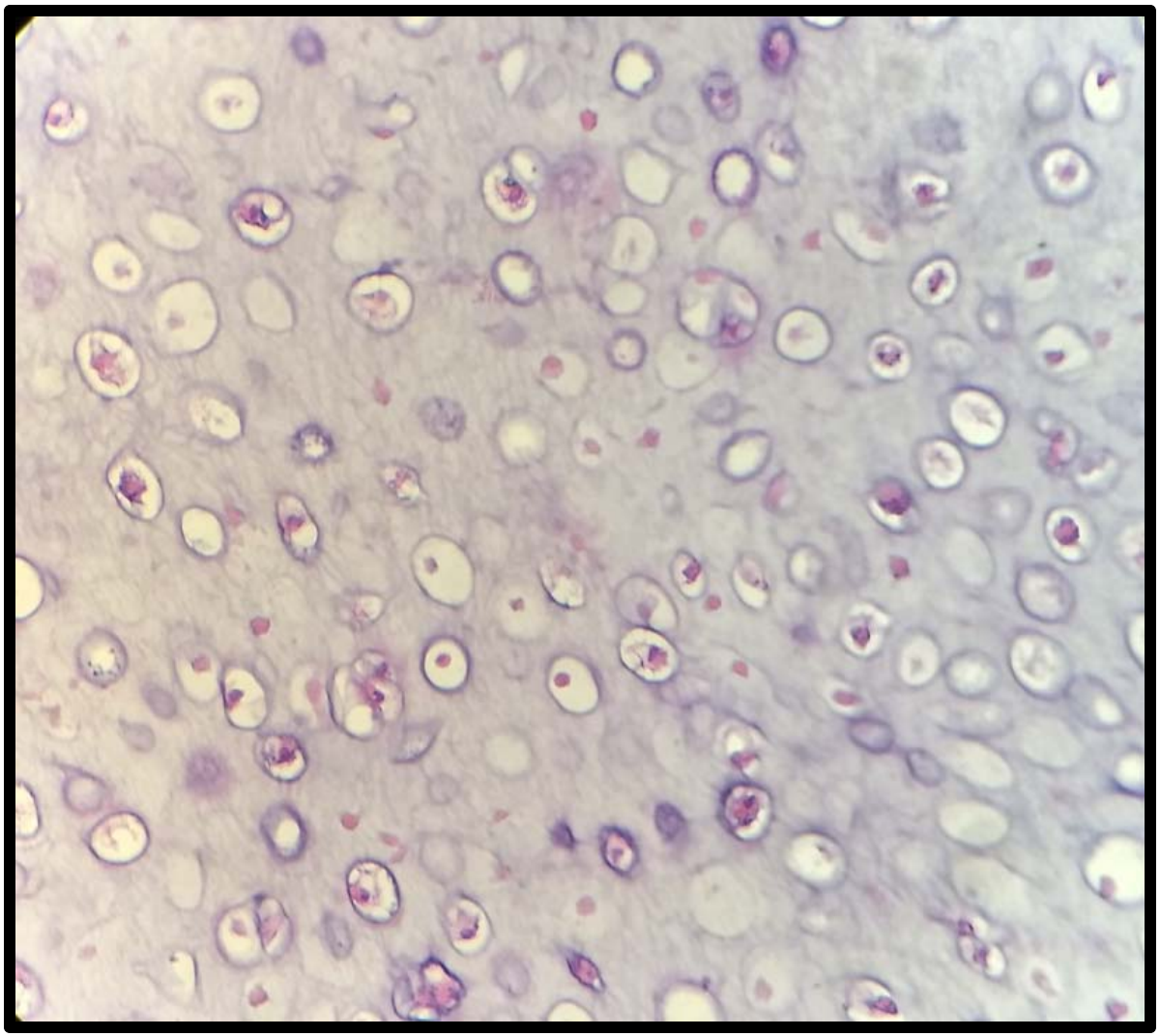
H&E, 40X



H&E, 100X



H&E, 400X



CYTOLOGY OF CHONDROMA

- Predominantly cartilaginous tissue fragments
- Abundant chondromyxoid ground substance
- Hyaline, pale violet material with H&E
- Cellularity of the fragments is generally low
- Tumor cells are uniform and rounded with a well-defined cytoplasm, rounded nuclei and one or two nucleoli

Ackerman M, Domanski H. Bone. In: Orell S, Sterrett G, editors. Fine needle aspiration cytology, 5th edition

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[Chondroma adjacent to Meckel's cave mimicking a fifth cranial nerve neurinoma. A case report].

[Article in Spanish]

Narro-Donate JM[1], Huete-Allut A[2], Velasco-Albendea FJ[3], Escribano-Mesa JA[2], Mendez-Román P[2], Masegosa-González J[2].

Author information

Abstract

Cranial chondromas are tumours arising from chondrocyte embryonic remnants cells that usually appear in the skull base synchondrosis. In contrast to the rest of the organism, where chondroid tumours are the most common primary bone tumour just behind the haematopoietic lineage ones, they are a rarity at cranial level, with an incidence of less than 1% of intracranial tumours. The case is reported on a 42 year-old male referred to our clinic due to the finding of an extra-axial lesion located close to the Meckel's cave region, with extension to the posterior fossa and brainstem compression after progressive paraparesis of 6 months onset. With the diagnosis of trigeminal schwannoma, a subtotal tumour resection was performed using a combined supra-infratentorial pre-sigmoidal approach. The postoperative histopathology report confirmed the diagnosis of cranial chondroma.

KEYWORDS: Cartilage tumour; Condroma craneal; Condroma intracerebral; Condroma intradural; Cranial chondroma; Intracerebral chondroma; Intradural chondroma; Skull base tumour; Tumor base cráneo; Tumor cartílago

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Chondroma of the falx cerebri

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DOI: 10.1590/1806-9282.61.01.017

Pedro Tadao Hamamoto Filho[1], Antonio Tadeu de Souza Faleiros[2], Michell Frank Alves de Oliveira[3], Marco Antônio Zanini[4], Maria Aparecida Marchesan Rodrigues[5]

without atypia within a dense chondroid matrix (Hematoxylin and Eosin 400x).

Discussion

Intracranial chondromas are most common on the skull base. This may be related to the cartilaginous ossification of base of the cranium. It is quite rare to find chondromas on the skull convexity, where ossification is membranous. Literature has pointed out some theories on the origin of chondromas on the skull convexity and *falx cerebri*, such as: metaplasia of meningeal fibroblasts and perivascular meningeal tissue, heterotopic embryonic cartilaginous rests, and displacement or migration of cartilaginous cells due to trauma of inflammatory process.[1,4] Intracranial chondromas may also be associated

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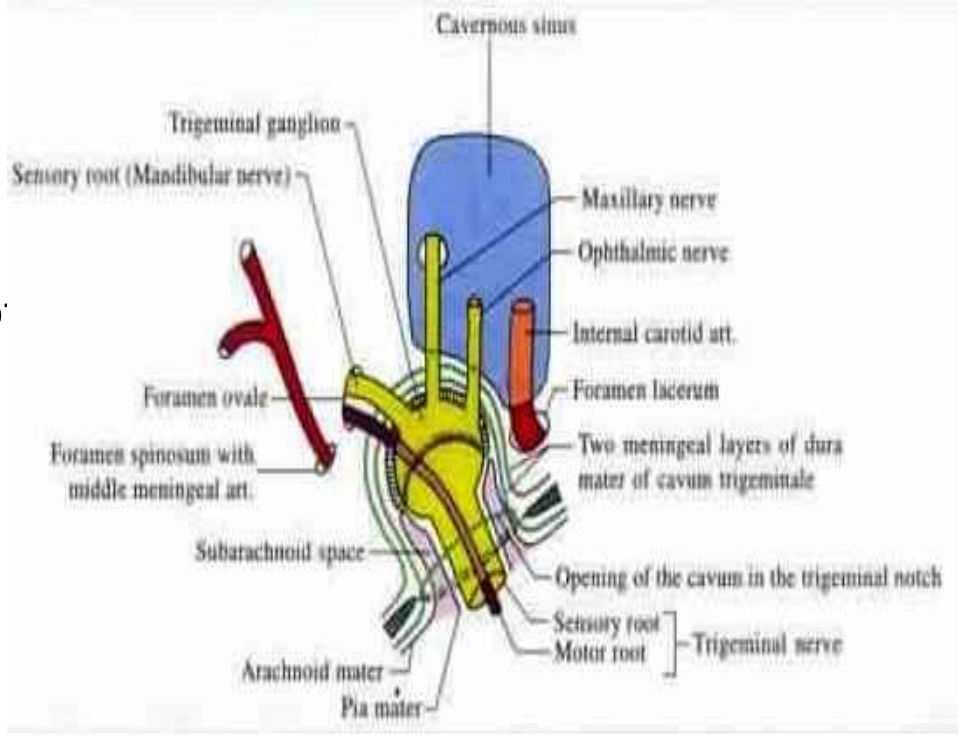
Meckel's Cave

- Trigeminal cave or Meckel 's cavity, is a cerebrospinal fluid-containing arachnoidal pouch protruding from the posterior cranial fossa which houses the trigeminal ganglion
- Posterolateral aspect of the cavernous sinus on either side o the sphenoid bone.
- Medial to the ganglion in Meckel 's cave is the internal carotid artery in the posterior portion of the cavernous sinus.
- Inferior is the motor root of the trigeminal nerve and the apex of the petrous temporal bone with the internal carotid artery traversing the carotid canal



Meckel's cave lesions

Neoplastic-

- Trigeminal schwannoma
- Meningioma
- Pituitary macroadenoma
- Metastases
- Epidermoid cyst
- Lipoma
- Base of skull tumors

Non-neoplastic-

- Internal carotid aneurysms/vascular malformation
- Petrous apex cephalocele

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TAKE HOME MESSAGE

- Squash cytology is useful
- Careful examination of smears give good diagnostic clues
- Be ready for surprises!!

THANK YOU