

Ocular Presentation in Diseases of central Nervous system

INTRODUCTION

Intracranial lesions may cause:

- serious ocular signs and symptoms
- neurological complications (raised ICT)
- cranial nerve impairment or brain compression

INTRODUCTION

Intracranial lesions may cause:

- serious ocular signs and symptoms
- neurological complications (raised ICT)
- cranial nerve impairment or brain compression

>50 % - present to an ophthalmologist initially

24-03-2022

INTRODUCTION

Intracranial lesions may cause:

- serious ocular signs and symptoms
- neurological complications (raised ICT)
- cranial nerve impairment or brain compression

>50 % - present to an ophthalmologist initially

Ophthalmologists play a vital role in early diagnosis and proper referral.

24-03-2022

HOW DO THE PATIENT PRESENT ?

24-03-2022

CLINICAL PRESENTATION

SYMPTOMS:

- Headache
- Diminution of Vision
- Seizures
- Behavioural and psychiatric changes
- Vertigo
- Paresis
- Dysphasia, dementia, deafness, tinnitus, ataxia, and diplopia etc.

24-03-2022

CLINICAL PRESENTATION

SIGNS *(one or more of following depending upon location and size)*

- *Vision*
- *Visual field defects*
- Proptosis
- Pupillary defect
- Papilloedema
- Optic atrophy

24-03-2022

CLINICAL PRESENTATION

SIGNS:

- Nystagmus
- Gaze palsy
- Paralytic squint [Cranial Nerve palsies-VI, VII, IV]

24-03-2022

Intracranial lesions

INFECTIONS

- MENINGITIS
- ENCEPHALITIS
- BRAIN ABSCESS
- NEUROSYPHILIS

24-03-2022

Intracranial lesions

ISCHEMIC AND CIRCULATORY DISORDERS

- INTRACRANIAL ANEURYSMS
- CEREBRAL ISCHEMIA AND HAEMORRHAGES
- HYDROCEPHALOUS

24-03-2022

INTRACRANIAL ANEURYSMS- 2 to 3 %

- in the region of circle of willis

1. Congenital weakness in the wall

2. Post traumatic

3. Post infection

- Carotico-cavernous fistula

24-03-2022

CEREBRAL ISCHEMIA AND HAEMORRHAGES

- Transient ischaemic attacks
- Cerebral strokes
- Intra cerebral hematoma
- Sub arachnoid haemorrhage

24-03-2022

HYDROCEPHALOUS

- Congenital
- acquired

24-03-2022

Intracranial lesions

DEMYELINATING
LESIONS

- MULTIPLE SCLEROSIS
- NEUROMYELITIS OPTICA
- SCHILDER'S DISEASE

MULTIPLE SCLEROSIS

- Loss of sensory or motor function of different parts of body
- Optic neuritis
- Sudden DV

24-03-2022

NEUROMYELITIS OPTICA

- Bilateral Optic neuritis with Lumbar / thoracic myelitis

24-03-2022

SCHILDER'S DISEASE, DIFFUSE SCLEROSIS

- OPTIC RADIATION,
- RBN,
- Muscle palsy,
- Nystagmus

24-03-2022

Chronic Progressive Ophthalmoplegia

- friedreich's disease [hereditary ataxia]

Intracranial lesions

HEAD INJURY

- CONCUSSION INJURY TO BRAIN
- CEREBRAL CONTUSION
- FRACTURE BASE OF SKULL

24-03-2022

Intracranial lesions

ICSOLS

- PRIMARY OPTIC TUMOURS
- SECONDARY TUMOURS
- HAMETOGENOUS LESION
- GRANULOMATOUS LESION
- PARASITIC CYST

24-03-2022

most common types in adults –

- pituitary adenoma
- meningioma
- craniopharyngioma

24-03-2022

	DIFFERENTIAL DIAGNOSIS OF ICSOL	OCULAR FEATURES
1	Frontal lobe tumours(gliomas, meningiomas)	Slight bulging of eye ball (ipsilateral).If extension into chiasm -foster kennedy syndrome ,papilloedema,optic atrophy,psychic changes, Alteration in character and tempera-ment
2	Olfactory groove tumours (meningiomas)	Frontal lobe and optic nerve pushed up(simulates pituitary tumour)
3	Sphenoidal ridge tumours (meningiomas)	Proptosis
4	Pituitary tumours (adenomas)	Optic nerve ischemia then atrophy, Bitemporal heminopia, Colour field defective
5	Suprasellar (Rathke’s pouch) tumours (craniopharyngioma)	Papilloedema, diplopia(VI nerve involvement
6	Median area tumours (Meningiomas)	Paralysis of V.VI,VII ,Homonymous hemianopia, Papilloedema
7	Temporal lobe tumours (Gliomas, meningiomas)	Contralateral homonymous hemianopia(Incongruous)
8	Occipital tumours	Congruous field defects
9	Cerebellar tumours (medulloblastoma)	Coarse horizontal nystagmus,Bilateral papilledema,diplopia(VI nerve palsy)
10	Cerebellopontine angle tumours (Neuromas, neurofibromas, or gliomas in connection with acoustic and vestibular nerves)	Paralysis of V.VI,VII
		www.FirstRanker.com

24-03-2022

- Extra-ocular disturbances.
 - (a) Sensory.
 - (b) Motor.
 - (c) Psy-chic
 - (d) Endocrinal.

24-03-2022

HOW DO WE CLINICALLY APPROACH.....

24-03-2022

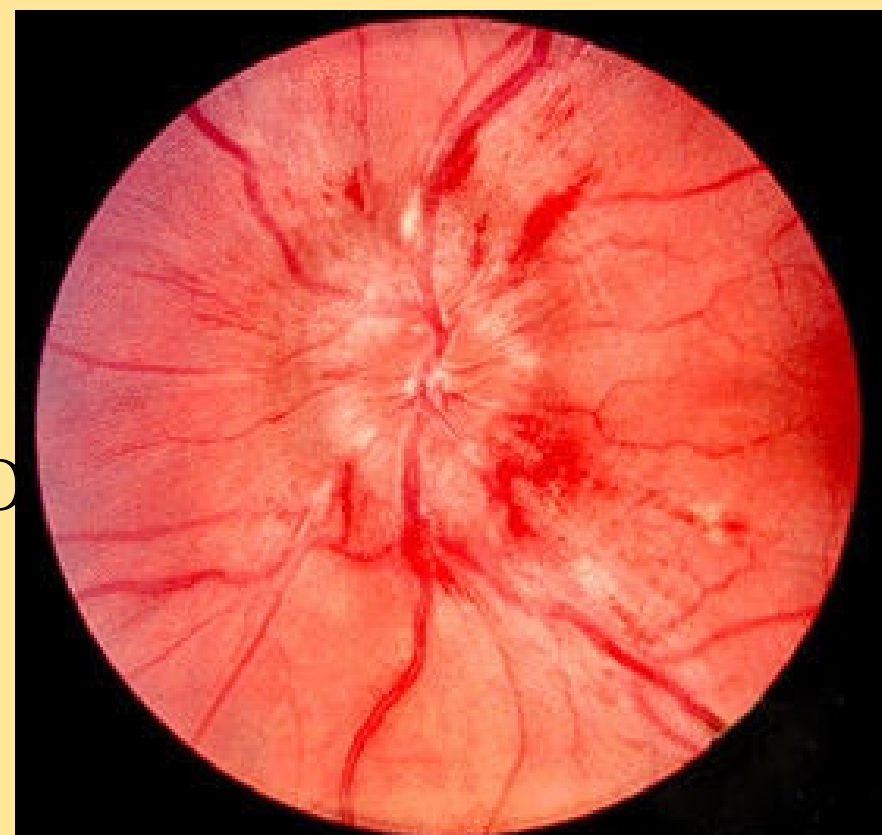
CLINICAL APPROACH

- HISTORY.....**v.v important**
- Presenting complaint
- Past
- Family
- Personal habits
- OPHTHALMOLOGICAL:
 - Vision (BCVA)
 - Visual fields and colour perception
 - Pupillary reflexes
 - Displacement of the eyeball.

24-03-2022

CLINICAL APPROACH

- Extraocular movements(gaze palsy, paralytic squint or nystagmus)
- Dilated fundus examination with IO (papilloedema, papillitis, optic nerve atrophy, retinal haemorrhages, arteritis, atherosclerotic changes ,etc..)



24-03-2022

HOW TO INVESTIGATE...???

24-03-2022

investigations

- CBC with ESR
- URINE ROUTINE AND MICROSCOPY

BASELINE

Special Investigations-

- MRI brain with orbit
- CT scan
- Fundus fluorescein angiography
- B- scan
- VER

24-03-2022

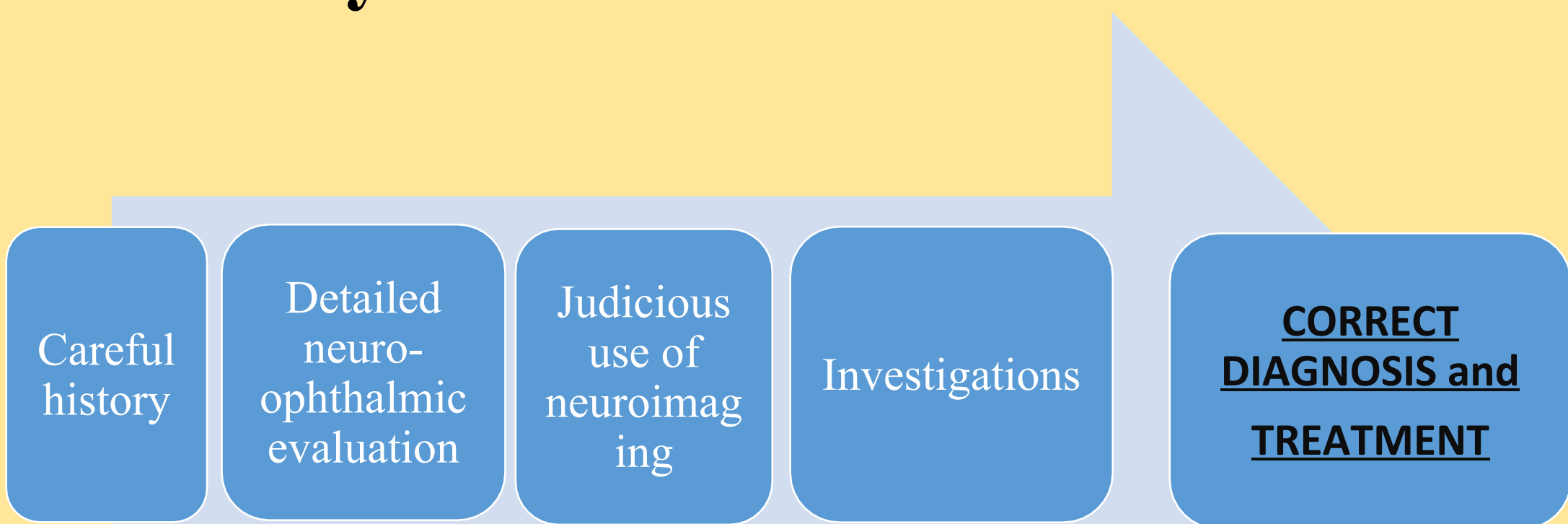
investigations

And other special investigations(if needed):

- Viral markers
- Mantoux test for Tuberculosis
- CSF analysis
- VDRL for syphilis
- Orbital biopsy
- FNAC of lesion
- X-Rays if needed
- Angiography
- Doppler ultrasonography

24-03-2022

Summary



24-03-2022