

Multiple Sclerosis

Definition:-

⇒ lesions separated in both time & place in the CNS, most common chronic neurological disorder among young adults.

Pathology & pathophysiology:-

⇒ White matter of the spinal cord & the brain & optic nerves.

⇒ Chronic inflammatory cells, myelin damaged. "without Axons"

⇒ Plaques ⇒ normal white matter but with foci of inflammation often near venules

⇒ as a result of demyelination:-

1) ↓ conduction velocity

2) loss of information.

3) breakdown of B.B.B then inflammation & edema

4) loss of myelin ⇒ then scar tissue **gliosis**

⇒ Shrunken area of sclerosis little deficit

Remission → Relapsing? ⇒ coz of remyelination

Census :-

1) epidemiology & prevalence is rising

- 1) environmental factors :- virus .
- 2) Immune mechanism :- many autoimmune disorder show linkage
no single gene has been shown to be sufficient to develop M

Epidemiology :-

- * temperate > tropical
- * more common in FEMALES ☹️ 3:1
- * at any age between 20-40 → M.C.P.A

* Presentation :-

1) Visual disturbances
↳ unilateral optic

2) limb weakness

3) sensory disturbance
↳ lesion in S.C or cerebral hemisphere.

neuritis :-

⇒ Pain around one eye
on eye movement



⇒ blurred vision may →
monocular blindness within
days or weeks

⇒ impaired visual acuity &
color vision

⇒ pink swollen optic disc on
Fundoscopy

⇒ visual field defects

⇒ relative afferent pupillary defect

⇒ diplopia with vertigo & N → brain stem!

* often resolves → month, weeks ---

pt left with some vision impairment

⇒ asymmetrical spastic ~
↳ Uhthoff phenomenon

* lesion on the P.C on the cervical
S.C → Rapid tingling sensation
Shooting down the arms, legs
neck flexion.

⇒ Uhthoff visual symptoms
temporarily much worse
after a hot bath.

* follows optic disc \Rightarrow optic atrophy

* other presentation \Rightarrow Pain in limbs, \uparrow inc for epilepsy
bladder disturbance urgency, urinary Retention.

* Course:-

\Rightarrow Factors effect Relapsing-remitting \Rightarrow physical Injury, intercurrent infection
pregnancy, emotional distress.
stress

1) Relapsing-Remitting disease:- 70-80% of pt
if leave some residual disability \Rightarrow 2

2) 2^o progressive disease:- 10-20% "No clear cut relapses & remissions"

3) 1^o progressive disease:-

4) progressive relapsing rare :-

* $\frac{1}{3}$ of pt more severely affected

* motor & cerebellar involvement \Rightarrow

Poor prognosis

\rightarrow Diagnosis

\Rightarrow clinical \Rightarrow 2 lesions in the CNS separated in time & space.

\Rightarrow laboratory diagnosis \Rightarrow

- MR Imaging of the brain & s.c

- delayed conduction central

- CSF \rightarrow Protein \uparrow Ig Proteins

\uparrow lymphocytosis

, oligoclonal bands by electrophoresis.

Management :-

Management
of an acute
attack

modification of
the Course
of the disease

Control of
Symptoms

Relapse

↳ Corticosteroids

methylprednisolone

IV, orally

* Improve the speed
of the Recovery
not the Degree.

of the disease

↳ Immunosuppressants

drugs: methotrexate

cyclophosphamide

azathioprine

↳ natalizumab

↳ treat aggressive
relapsing-remitting MS

→ spasticity flexor spasms

* botix to affected muscle

→ Cerebellar tremor

gabapentine, clonazepam

→ Fatigue

amantadine, selegiline

→ bladder disturbances

oxybutynin

→ Depression

selective serotonin

reuptake inhibitors

sertraline

→ Pain

gabapentin

