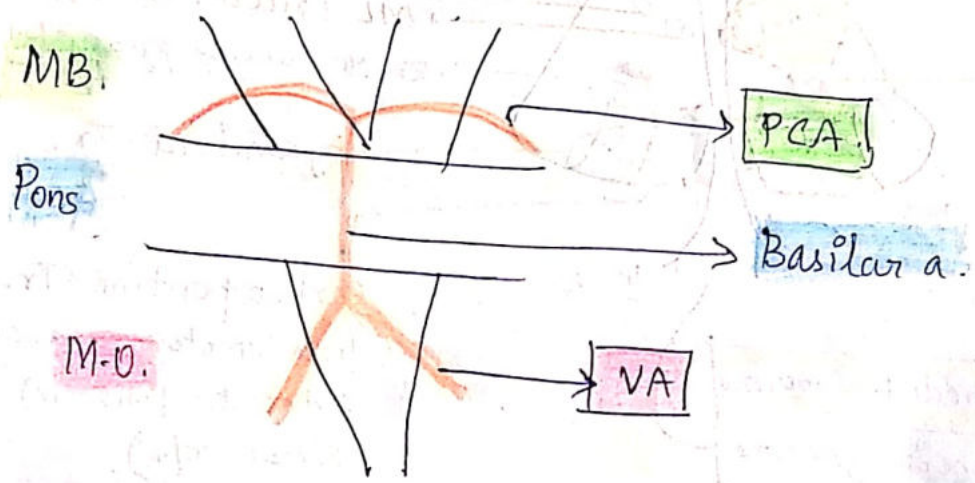
Area of Brain stem & Blood Supply:



Injury to .....

1) Medial (leminiscus) → (C/L) loss of Consc. propⁿ.

2) Lateral leminiscus → C/L Hearing loss.
(not a complete loss
bcoz of Bilat. representⁿ.
of auditory pathway).

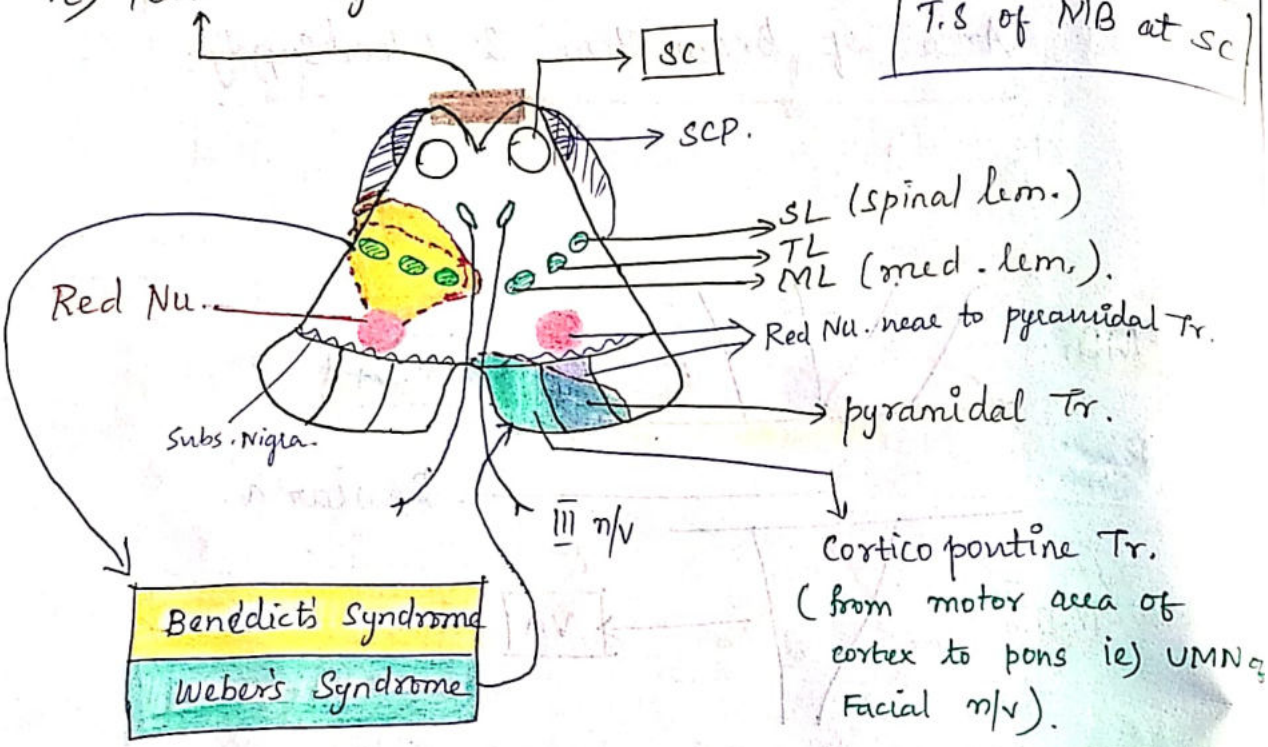
3) Spinal " → C/L loss of pain & T.
(Body).

4) Trigeminal " → " " " " (face).

v) MIDBRAIN SYNDROME

c) Perinald's syndrome → Difficulty in upward gaze.

T.S of MB at SC



Note:

1) Corticopontine fibres ⇒ contains fibres of UMN of VII n/v.

2) At the level of SC, LATERAL LEMINISCUS is not seen bcoz it relays at IC. & thro' inf. brachium goes to MGB.

3) Arrangement of leminiscus:

ML → most medial

LL → most lat.

SL → formed by lat. Sp.Th.Tr. so its lat. to TL.

* Find out the common struc. affected in ② diff. lesions., Apart from the Common struc. lesioned what is the diff. aspect .....?

---

a) Benedict's Syndrome:

ML $\xrightarrow{\#}$ C/L Loss of Cousc prop.

TL $\xrightarrow{\#}$ C/L loss of pain & T (face).

SL $\xrightarrow{\#}$ & " " " " (body).

SCP $\xrightarrow{\#}$ I/L Ataxia

↳ Bcoz Spino Cerebellar Tr. are of ipsilat. side.

Red Nu. $\xrightarrow{\#}$ Tremors.

III n/v

* LPS $\xrightarrow{\#}$ I/L ptosis.

* MR $\xrightarrow{\#}$ I/L Divergent squint

lesion of n/v ⇒ LMN lesion.

* SR, MR & IO $\xrightarrow{\#}$ I/L Down & out eye ball.

* Sph. pupillae $\xrightarrow{\#}$ Dilated pupil & loss of light reflex.

* Ciliaris $\xrightarrow{\#}$ loss of Accomodation Reflex

Action of m/s supp by III n/v

1) LPS → opening of eyelids.

2) MR → antagonist of LR. (supp. by VI n/v)
→ (to see towards medial side)

3) SR, ~~MR~~, IO
→ To see up.

4) sph. pupillae → constric^n of pupil.

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② most imp. pts. to Remember (unique) in Benedicts Syndrome :

① I/L III n/v palsy with.

② C/L loss of pain & T. from whole body.

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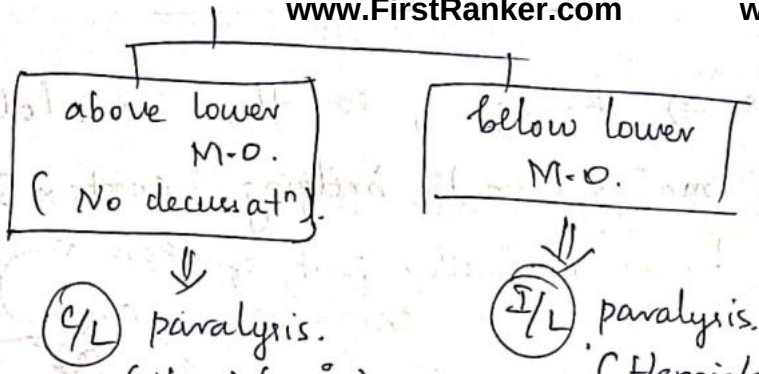
b) WEBER's SYNDROME.

* III n/v —do—

* UMN of VII n/v $\xrightarrow{\#}$ C/L paralysis of LOWER ½ of face.

* pyramidal Tr. $\xrightarrow{\#}$ C/L Hemiplegia

Pyramidal Tr. injury



Benedict's	Weber's
Common ⇒ ← III n/v palsy →	
1) on the opp. side of III n/v palsy, if there's complete loss of pain & T.	1) on the opp. side, if there's paralysis of: Facial paralysis, Hemiplegia

MB — Benedict's & Weber } stroke of PCA

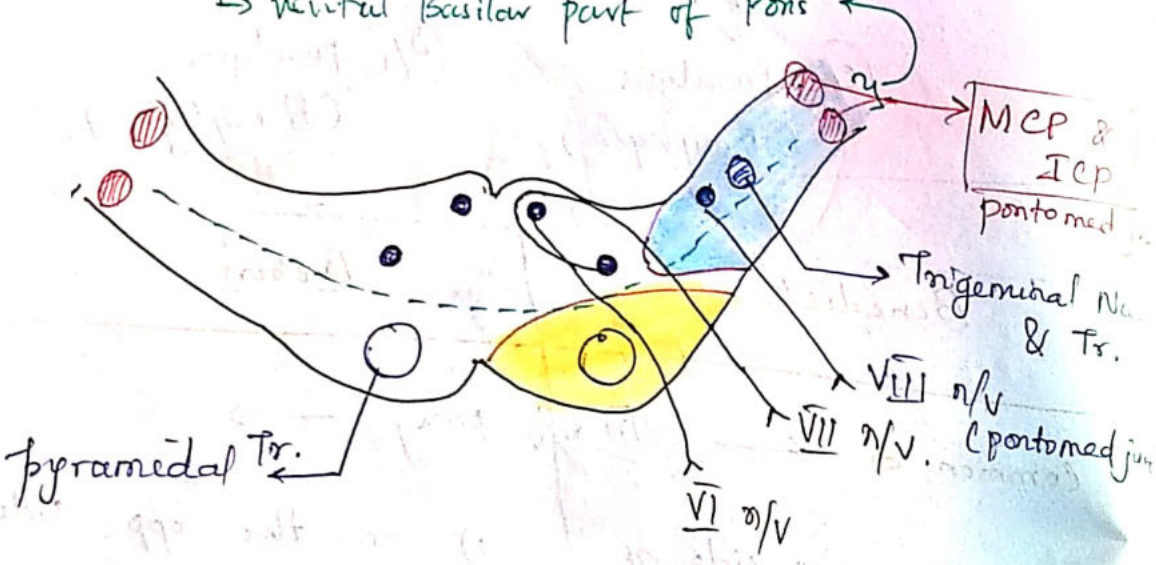
Pons: Millard Gubler & ponto cerebellar angle syndrome } stroke of BA. (Basilar). ⇒ Acoustic neuroma

M.O — medial med. syn ⇒ Stroke of VA (Ant Spinal artery).

lat. med. syn (Wallenberg) ⇒ Stroke of "PICA" (Branch of VA).

ii) Pontine Syndrome :

pons ⇒ Bridge, so there a lot of white matter (Tr.) bridging cortex & lower part
↳ ventral Basilar part of pons



a) Millard Aubler's Syndrome :

VI n/v —#→ I/L convergent squint.

VII n/v —#→ I/L facial paralysis.

pyramidal Tr —#→ c/L Hemiplegia.

On one side of the body ⇒ Abduc. n/v damaged
on other side ⇒ Hemiplegia

So it's aka Abducent Alternating Hemiplegia).

b/l cerebellar Syndrome

C cause : m/c Schwann cell tumor - Acoustic Neuroma)

VII n/v $\xrightarrow{\#}$ I/L facial paralysis.

VIII n/v $\xrightarrow{\#}$ Tinitis, I/L progressive deafness, balancing issue.

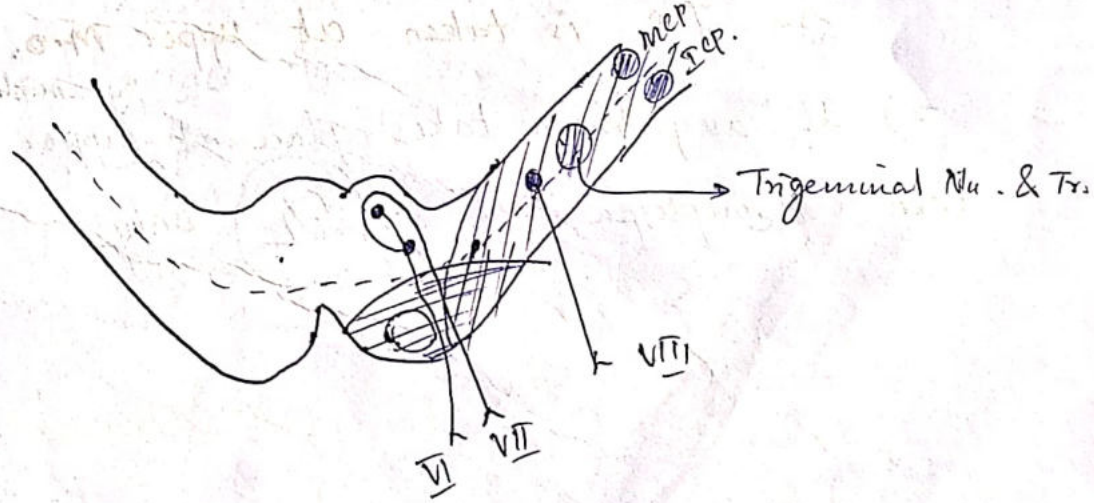
V nu. $\xrightarrow{\#}$ I/L loss of pain & T. [face]

McP/ICP $\xrightarrow{\#}$ I/L ataxia.

Note:

n/v nuclei ganglion $\xrightarrow{\#}$ I/L

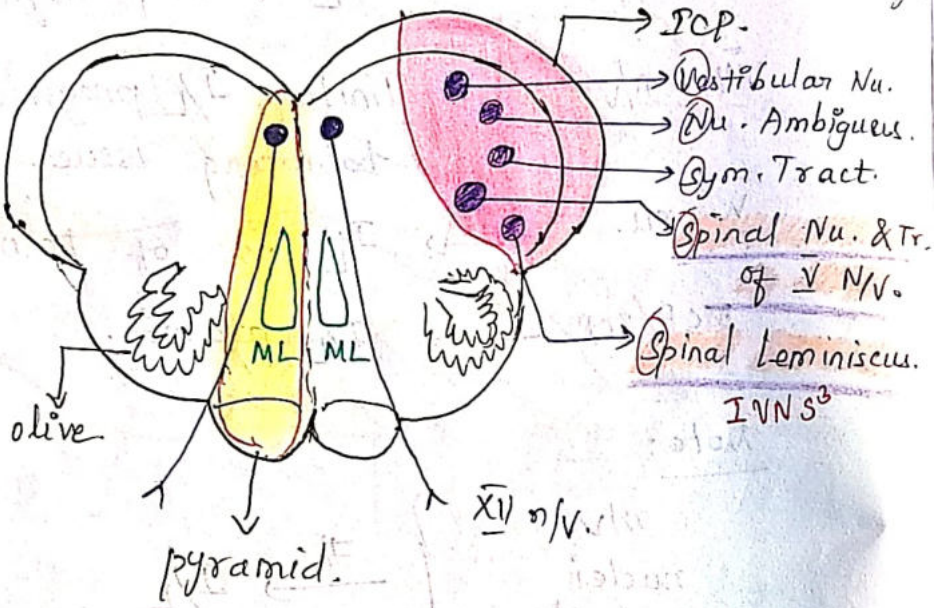
leminiscus $\xrightarrow{\#}$ C/L.



(ii) Medullary Syndromes:

T.S of M.O → Butterfly shaped ⇒ ICP, olive, pyramid

WALLENBURG / Lat med syn



Note:

* If pyramids are clearly visible. (elevations)

⇓

decussatn has not yet taken place

So T.S is taken at upper M.O.

⇒ If any lesion takes place at a pyramid (upper M.O.) then Hemiplegia will be C/L only.

Medial medullary syndrome / Dejerine's Syndrome

ML $\xrightarrow{\#}$ C/L loss of conc. prop.

XII n/v $\xrightarrow{\#}$ I/L ~~loss of~~ Tongue paralysis

pyramidal Tr $\xrightarrow{\#}$ C/L Hemiplegia.

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③ Midline syndromes of B.S.

- Weber (I/L III n/v palsy) — III n/v palsy
- Millard's Gubar's (I/L facial palsy) — VII n/v palsy
- Medial Medullary Syn. (I/L Tongue paralysis) — XII n/v palsy

developmentally also midline → motor Basal plate.

↓ motor paralysis → Hemiplegia.

C/L Hemiplegia.

Note: in case of I/L Tongue paralysis when you ask the patient to protude the tongue. The Tongue will deviate TOWARDS the side of lesion. bcoz

↳ Genioglossus will help pull the Tongue out, since one genioglossus is paralysed the other side will push it (along with the mass of the tongue).

But in case of other m/s paralysis. there will deviation AWAY from side of lesion.

b) Lat. medullary Syndrome / Wallenberg Syndrome

I-VN S^3.

i) ICP $\xrightarrow{\#}$ I/L Ataxia.

ii) Vestibular Nu. $\xrightarrow{\#}$ Nystagmus, Vomitting, Vertigo et

iii) Nu. Ambiguus $\xrightarrow{\#}$ motor palsy of $\overline{IX}$, $\overline{X}$, $\overline{XI}$

$\Downarrow$

I/L Bulbar paralysis
with barring of Tongue m/s.
& loss of Gag (R) ($\overline{IX}$ &

iv) Sym. Tract
$\xrightarrow{\#}$ I/L Horner's syndrome.

v) spinal Nu. & Tr. of $\overline{V}$ - n/v $\xrightarrow{\#}$ (I/L)* loss of pain & T (face).

vi) Spinal LEMINISCUS $\xrightarrow{\#}$ (C/L)* loss of pain (body).

(X) unique

X X