



Dr. Janani's Unit
Kanchi Kamakoti CHILDS Trust Hospital

AN UNUSUAL CAUSE OF HORNER'S SYNDROME

Case History

- ⦿ 6 year old boy with no significant past medical history.
- ⦿ Fever for 5 days. No localizing signs.
- ⦿ History of left shoulder pain. History of trivial fall 2 weeks back.
- ⦿ Father felt left eye looks slightly smaller than right eye for past 5 days.

Examination

- ⦿ Partial Ptosis Left Eye
- ⦿ Left Pupil – 3mm, Right Pupil – 4mm
- ⦿ Neurological Examination – Otherwise normal
- ⦿ Spine – Normal
- ⦿ No limitation of movements at left shoulder
- ⦿ Vitals - Normal
- ⦿ Hepatomegaly
- ⦿ Eschar in the Scrotum.

Ophthal Evaluation

- ⦿ Anisocoria confirmed on dark dilatation test
- ⦿ Dilatation lag present
- ⦿ To evaluate for cause of Horner's Syndrome
- ⦿ To look at photos in infancy and kindergarten



Course in the Hospital

- ⦿ Counts – Leukocytosis
- ⦿ Scrub Typhus IgM – Reactive
- ⦿ Blood Culture – No Growth
- ⦿ Started on Doxycycline
- ⦿ Neuroimaging – To do or not to do. That is the question ?
- ⦿ Neurologist Opinion sought. Planned to follow up as OPD and discharged. Came for follow-up after one week.

15 days later...

- ⦿ Readmitted for evaluation
- ⦿ Clinical Examination – Status Quo + Left Torticollis.
- ⦿ ESR – 20. Counts - Normal
- ⦿ MRI Brain and Cervical Spine was planned.
- ⦿ Only one additional history.







Etiology ?

- Coagulation Profile:

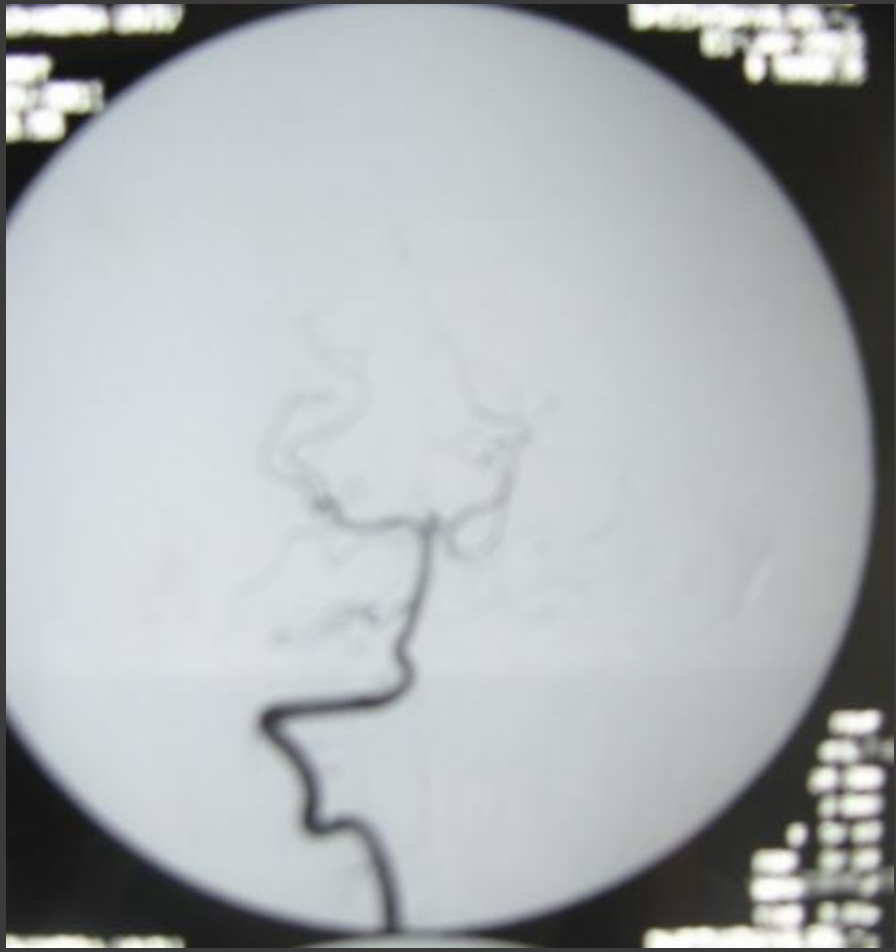
PT/PTT – Normal

Factor XIII Functional

Assay – Normal

- ? AV Malformation





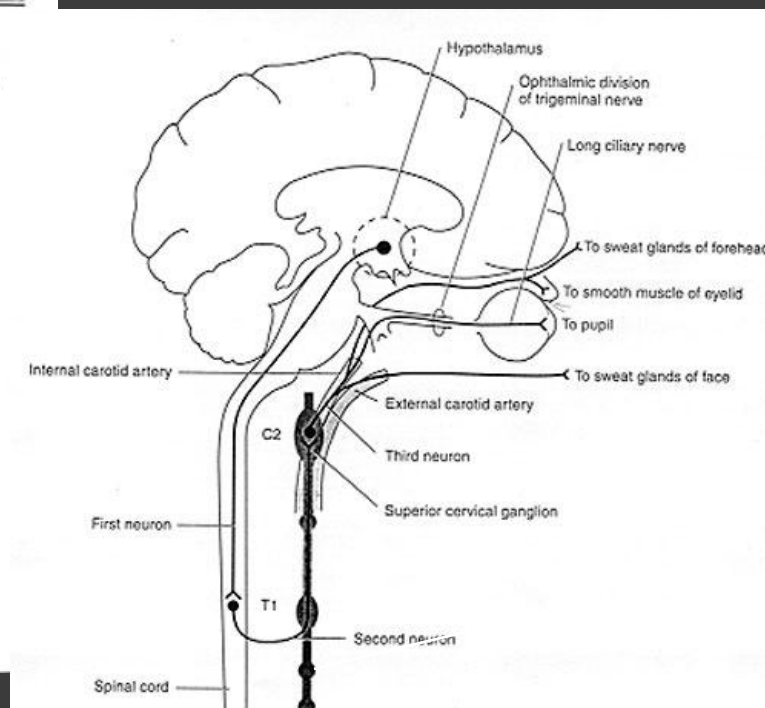
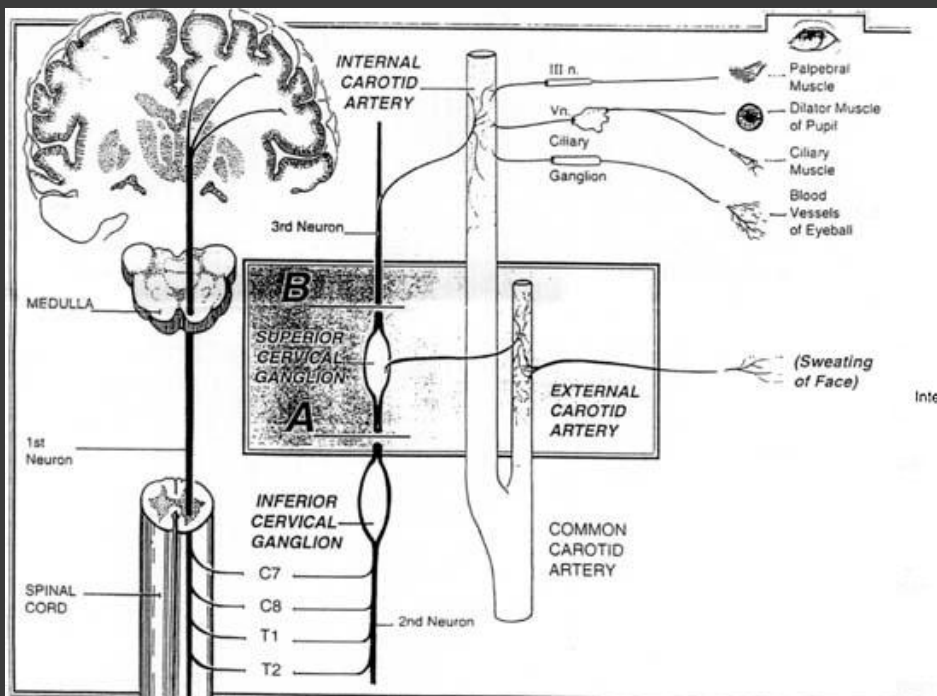


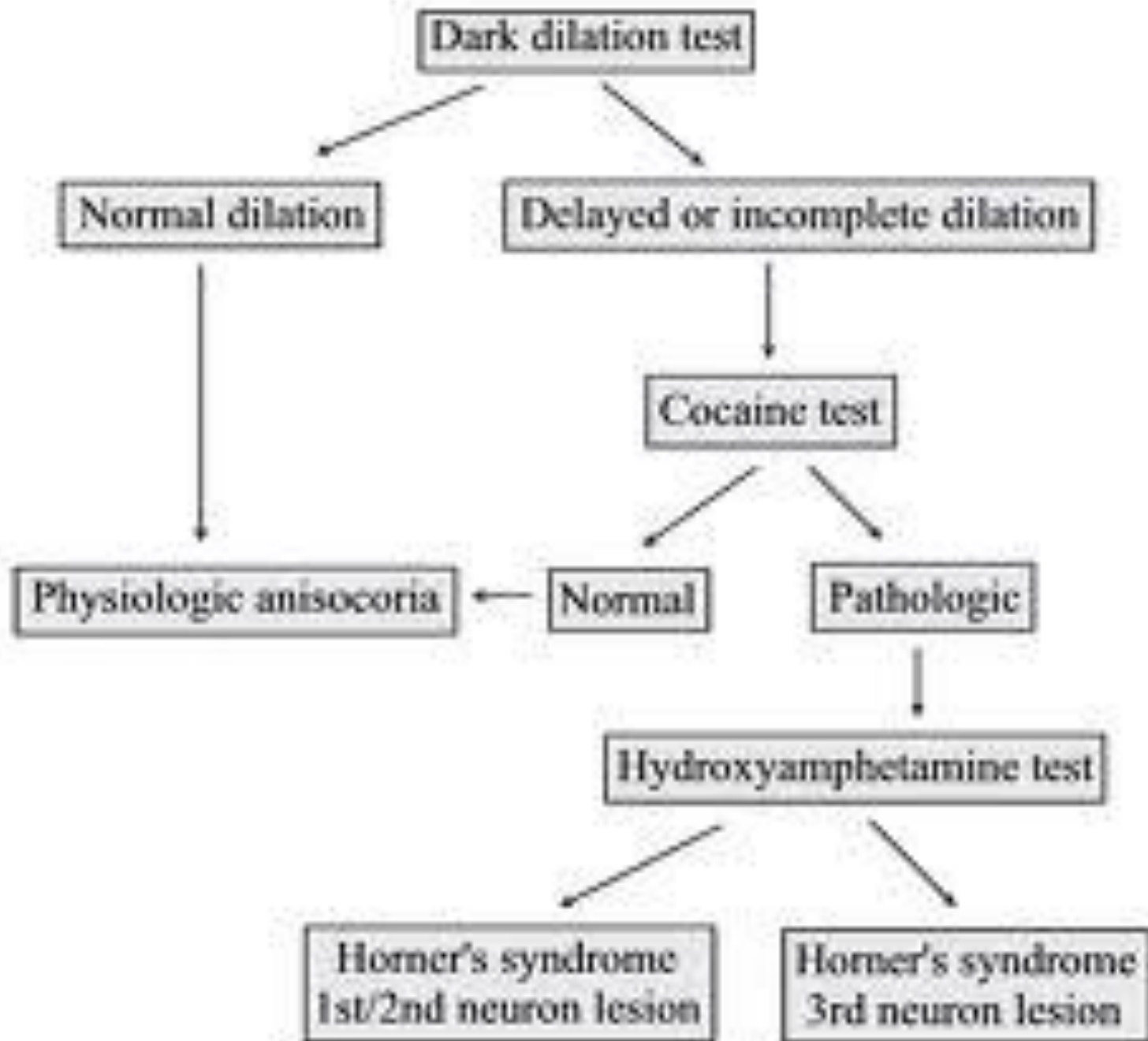
Yoga Emergency Hotline,
how may I help you?

Review of Literature

Salient Features

- ⦿ Constellation of signs produced when Sympathetic innervation to the eye is interrupted.
- ⦿ Partial Ptosis
- ⦿ Upside Down Ptosis
- ⦿ Miosis with dilatation lag
- ⦿ Anhydrosis+/-
- ⦿ Iris Heterochromia





Pediatric Horner's Syndrome

– Jeffery et al J of AAPOS 1998; 2(3) : 158-67

- ⦿ 72 consecutive cases of Horner's Syndrome
- ⦿ 42% Congenital, 42 % History of Neuro-Surgery, 15% acquired
- ⦿ Congenital – 53 % history suggestive of difficult delivery. Only 3 had associated brachial plexus injury
- ⦿ 5 had no determinable cause

Incidence of Pediatric Horner's Syndrome and the Risk of Neuroblastoma

-Arch Ophthalmol. 2010;128(3):324-329

- ④ 40 cases in 20 years (Incidence of 1.42 cases /100,000 population)
- ④ 11 Congenital – 7 birth trauma
- ④ 9 Acquired – 6 history of surgery, 3 unknown, no neuroblastoma

Pediatric Horner's – Etiology and role for Imaging

– Am J Ophthal 2004;142(4):651–9

- ⊙ 56 cases – 28 acquired
- ⊙ 18 had complete imaging and urinary studies – all urine are negative. 6 had mass lesions, 4 Neuroblastoma, 1 Ewing's.
- ⊙ No surgical history – need extensive evaluation.
- ⊙ Imaging>>> urinary studies

What we learnt?

- ⦿ Detailed History clinches diagnosis in >80% of cases.
- ⦿ When in doubt – ask for old photos
- ⦿ Investigations for Congenital and Acquired Horner's differ.
- ⦿ When everything is negative – go all out for a diagnosis

Spontaneous Spinal Epidural Hematoma

- Extremely Rare
- Venous or Arterial
- Venous – Loose areolar tissue with rich venous plexus

Sudden rise in pressure

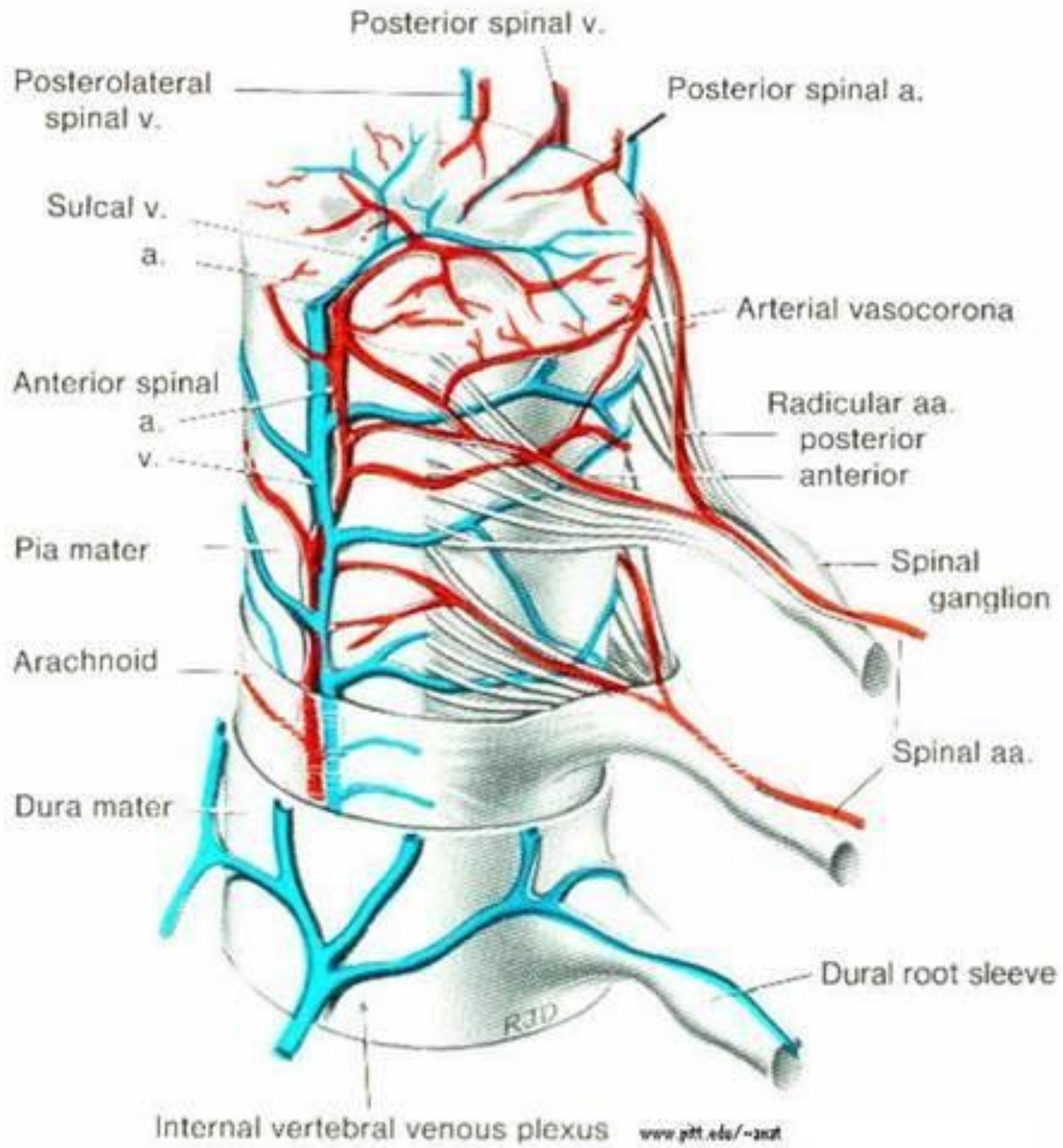
Reversal of flow

Rupture and hematoma

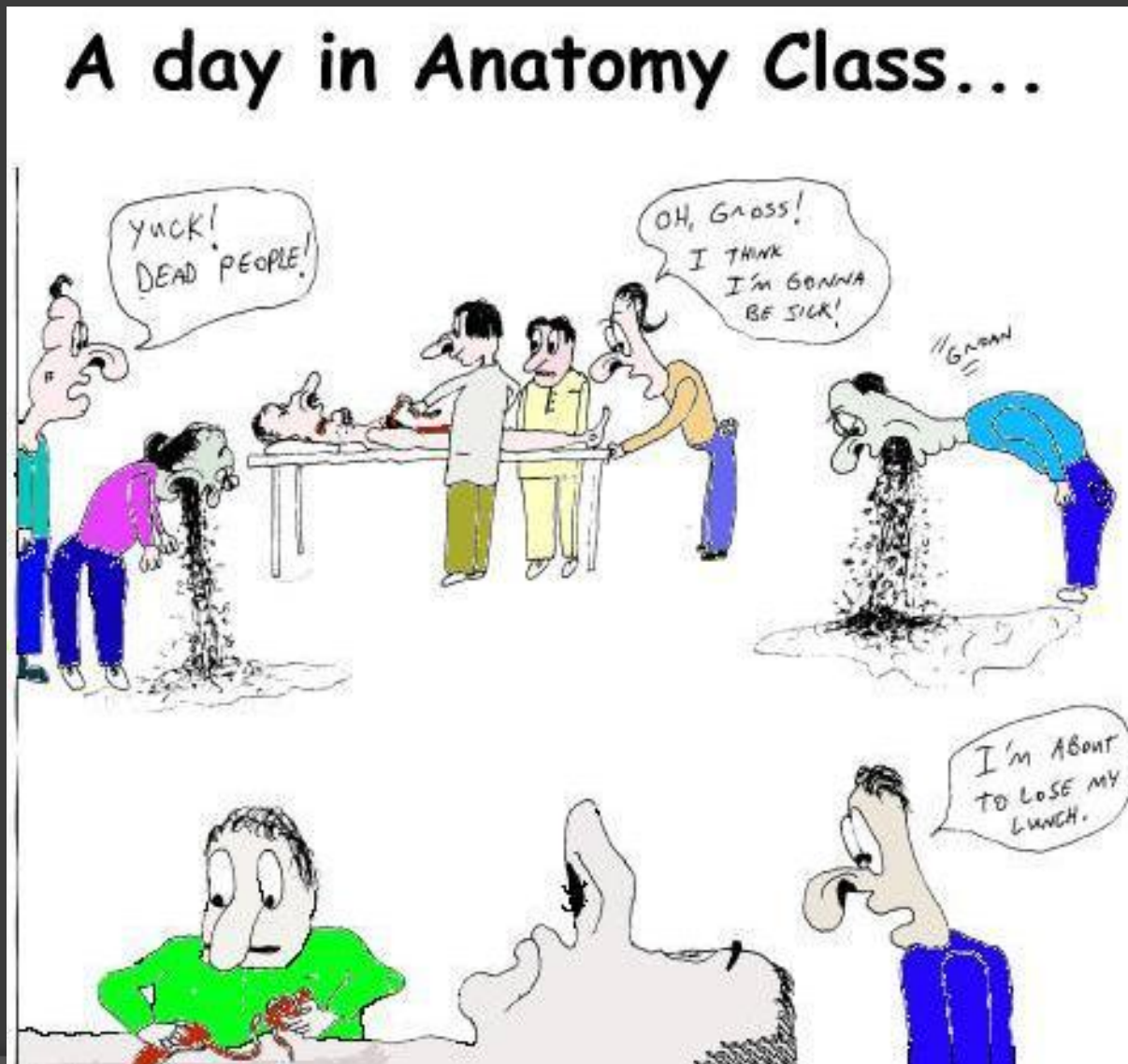
- Arterial – Traction on nerve roots
- Disruption of tortuous arterial plexus

- Occult AVM

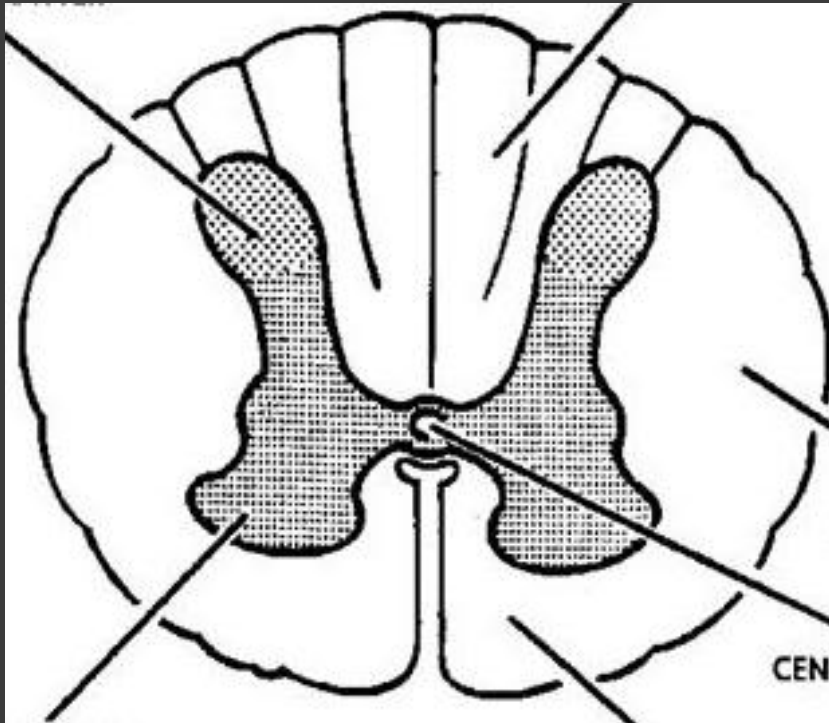
- Dorsal – Loose Tissue , Ventral - Spine



Why did our child develop Horner's?



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- Intra – Medullary

Sympathetic

Sensory

Motor

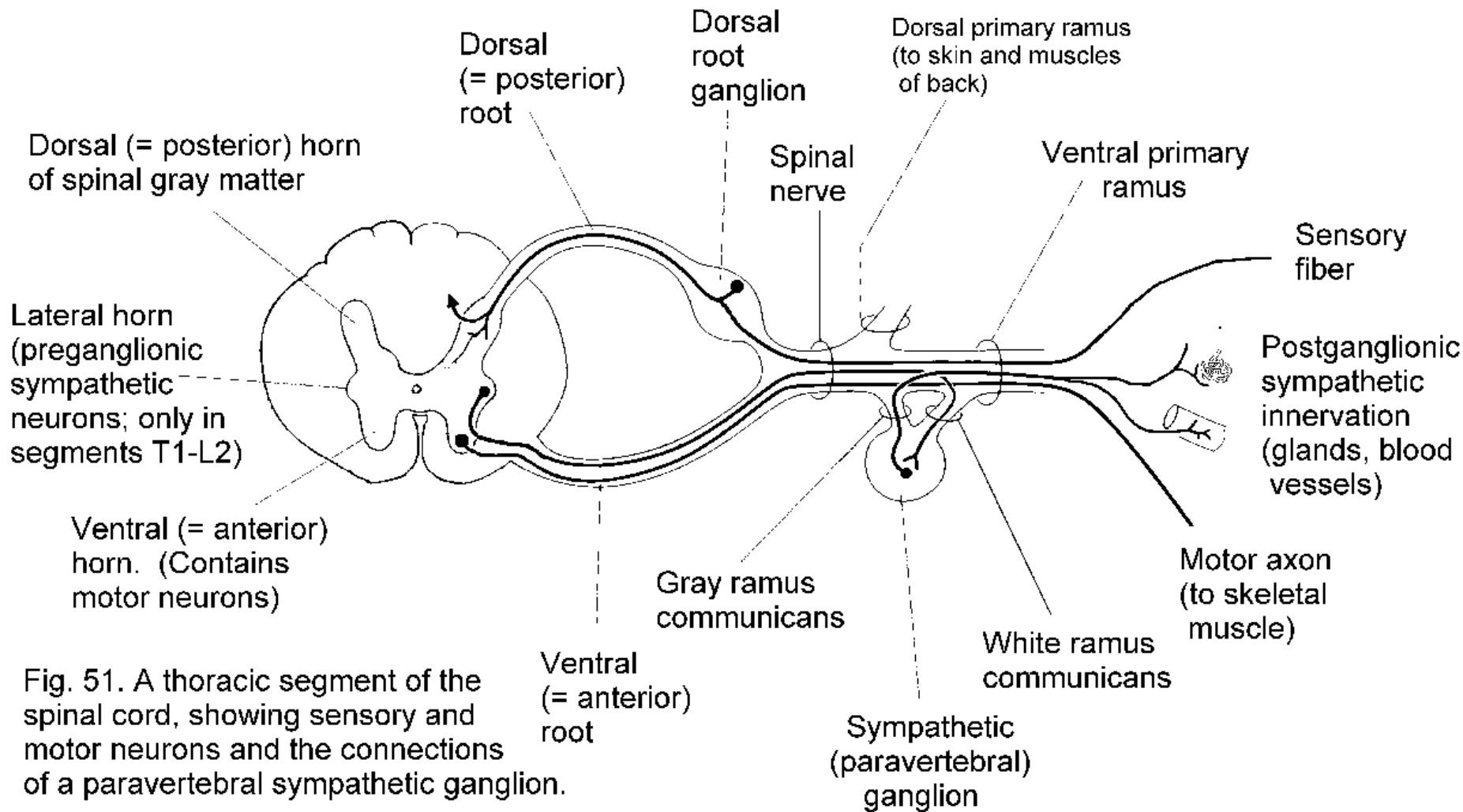
- Extra – Medullary

Motor

Sensory

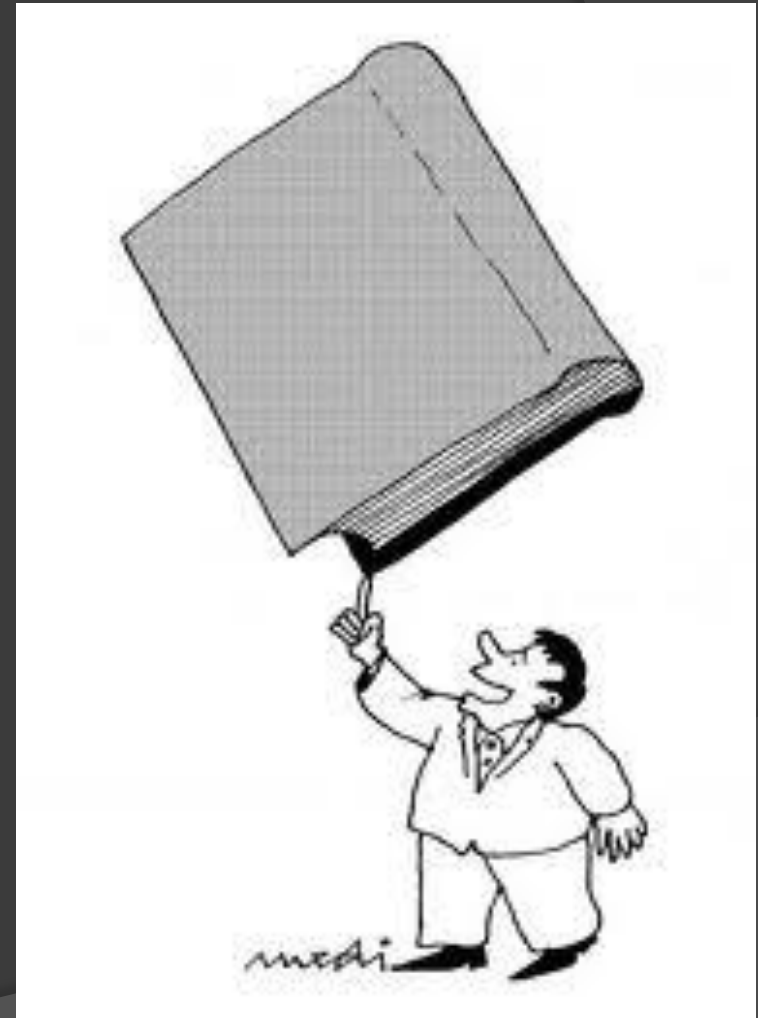
Sympathetic

Why did our child develop Horner's?



Literature

- Unusual presentation of a spontaneous spinal epidural haematoma – *Acta Neurol Belg* 2009
- A case of Brown-Sequard syndrome with associated Horner's syndrome after blunt injury to the cervical spine *Emerg Med J* 2001
- Complete nonsurgical resolution of a spontaneous spinal epidural hematoma -*The American Journal of Emergency*





Here is an Enlightened cartoon
for your enjoyment



“That isn’t exactly what I had in mind when I asked for enlightenment.”

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THANK
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