



Government of **Western Australia**
WA Country Health Service



Mind over Matter; when it matters

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Final Year Medical Advanced Trainee
Kalgoorlie Health Service

Case Presentation

Acute Presentation

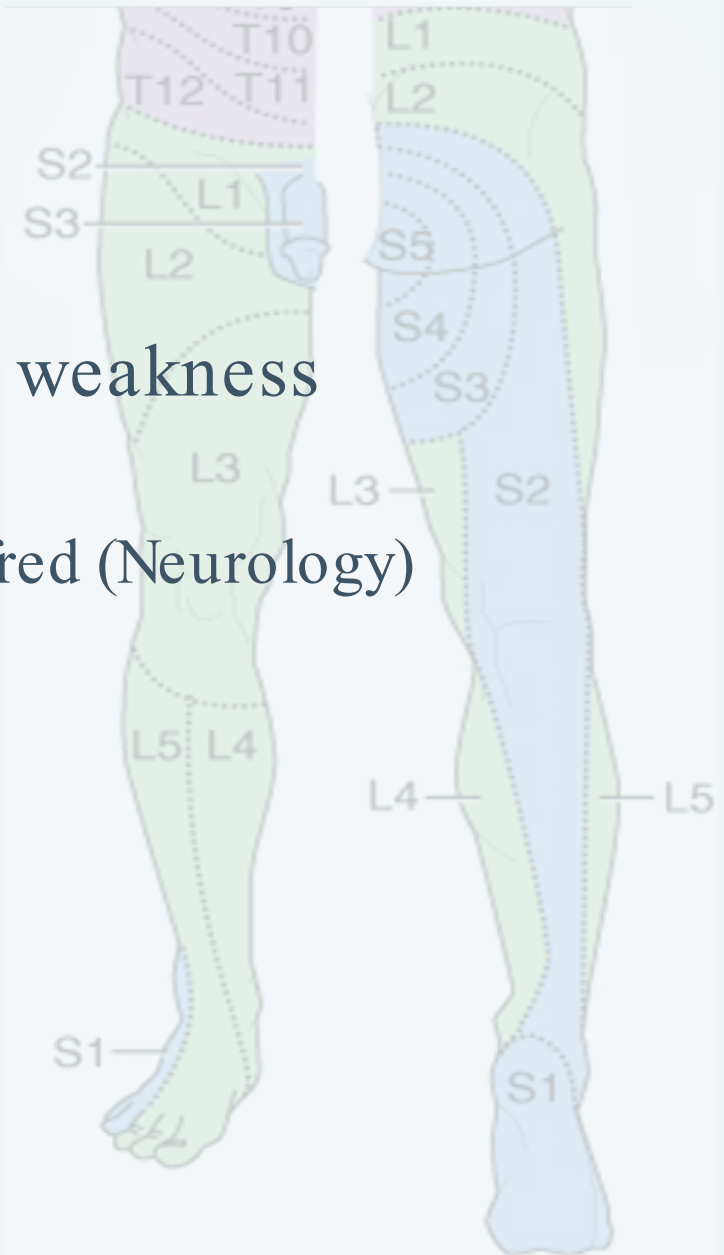
- 49F with sub-acute bilateral lower limb weakness
 - 4-day history of progressive weakness
 - Associated paraesthesia
 - Para-umbilical region
 - Left ankle and right foot
 - Reported urinary incontinence
- Preceding onset reported 3 days of migraines and LRTI 2-3 weeks prior to onset
 - Rx courses of PO Amoxicillin, Cefalexin and Azithromycin

Past Medical History

- Sarcoidosis – Diagnosed 2015
 - Pulmonary and Systemic; *Prednisolone 25mg Daily*
- Focal Epilepsy – Childhood Diagnosis
 - *Lamotrigine 50mg TDS and Levetiracetam 500mg BD*
- Atrial Fibrillation
- Hypertension
- Asthma
- Obesity

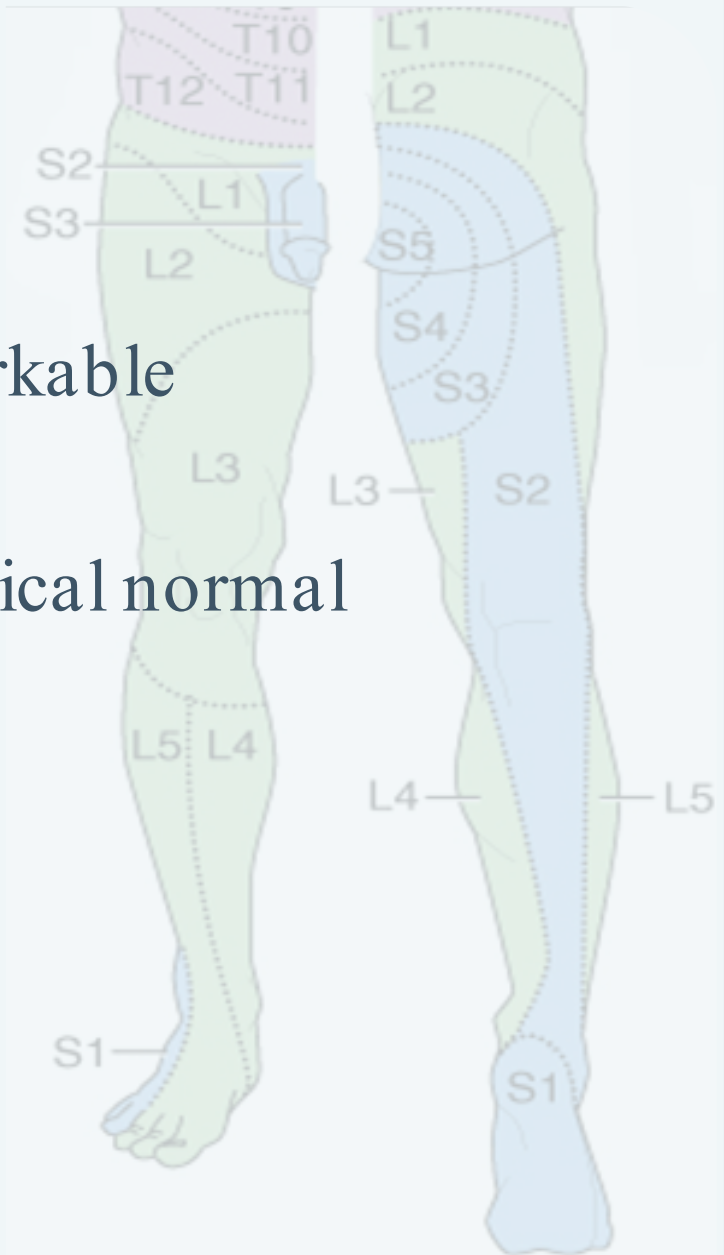
Past Medical History

- Resolved significant lower limb weakness
 - 2015
 - Extensive Investigation at The Alfred (Neurology)
 - MRI-B/Spine/EMG/LP NAD
 - Nil organic cause of symptoms



Examination

- Systemic Examination unremarkable
- Cranial Nerve and UL neurological normal



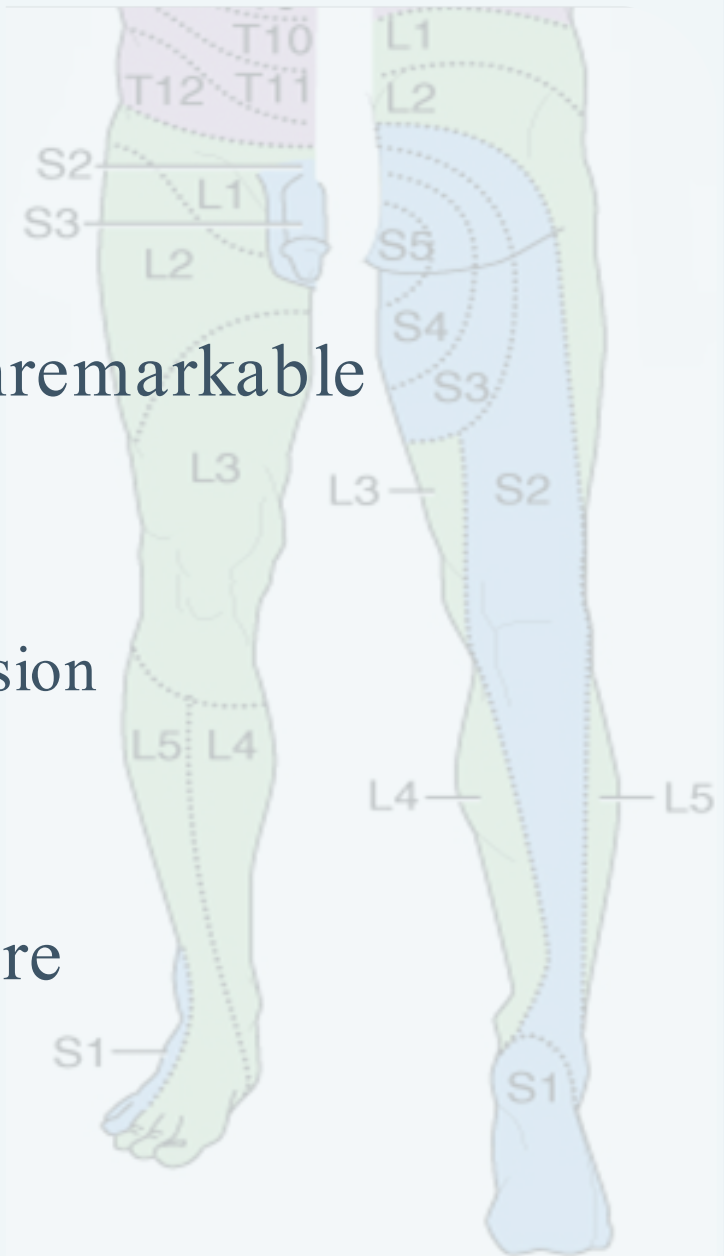
Lower Limb Examination

- Bilateral flaccid tone
- 3/5 Bilateral proximal power
- 2/5 Bilateral **distal** power
- Reduced knee jerk, areflexic ankles, **upgoing** plantar
- Patchy sensory examination
 - **Distal** > proximal
 - **DCML** (FT, Vib, Prop) > STT (Pain and Temp)



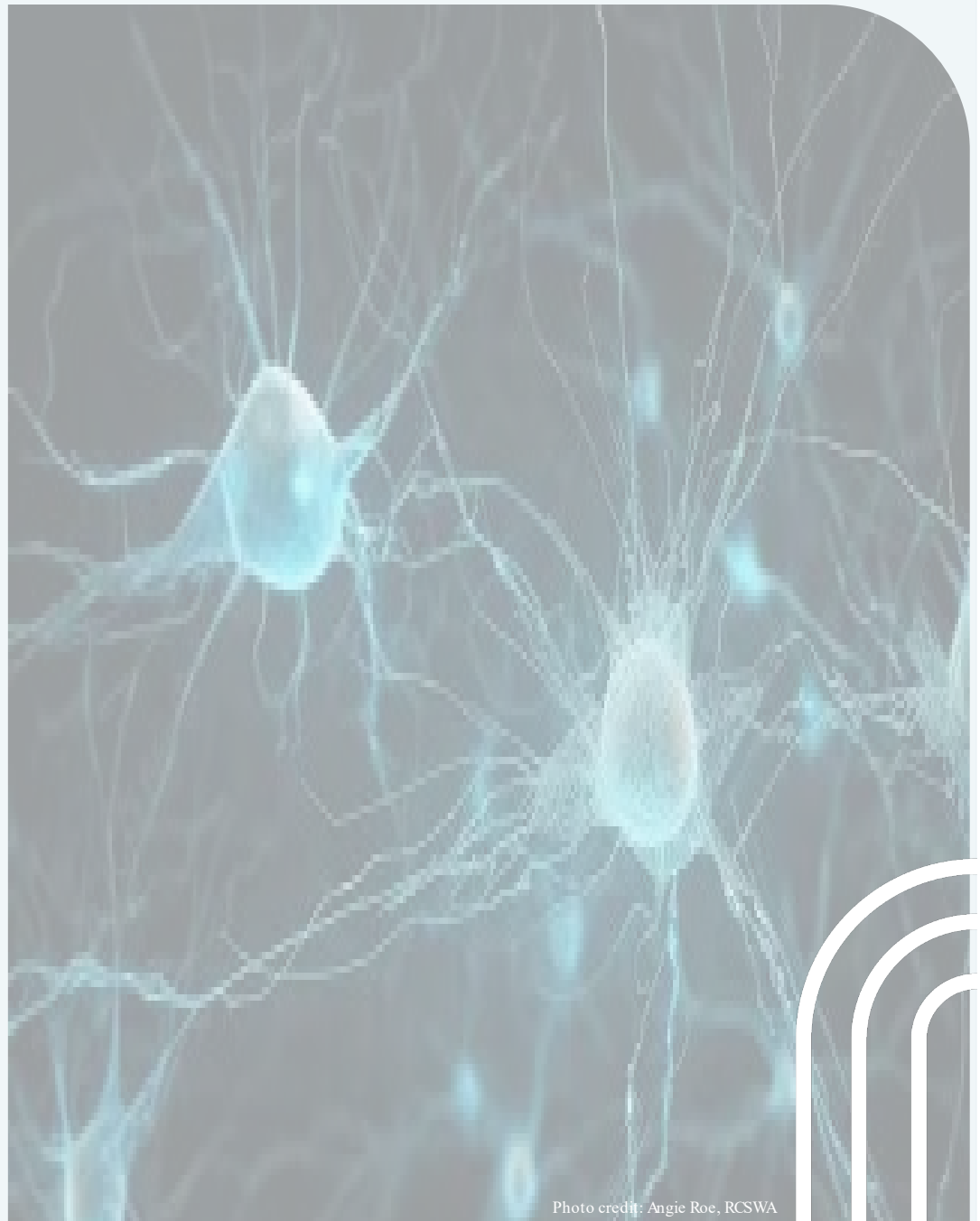
Investigations

- Baseline and inflammatory : Unremarkable
- MRI-B and Whole Spine
 - Unilateral right L5/S1 disc protrusion
 - Otherwise NAD
- Patient **refused** lumbar puncture



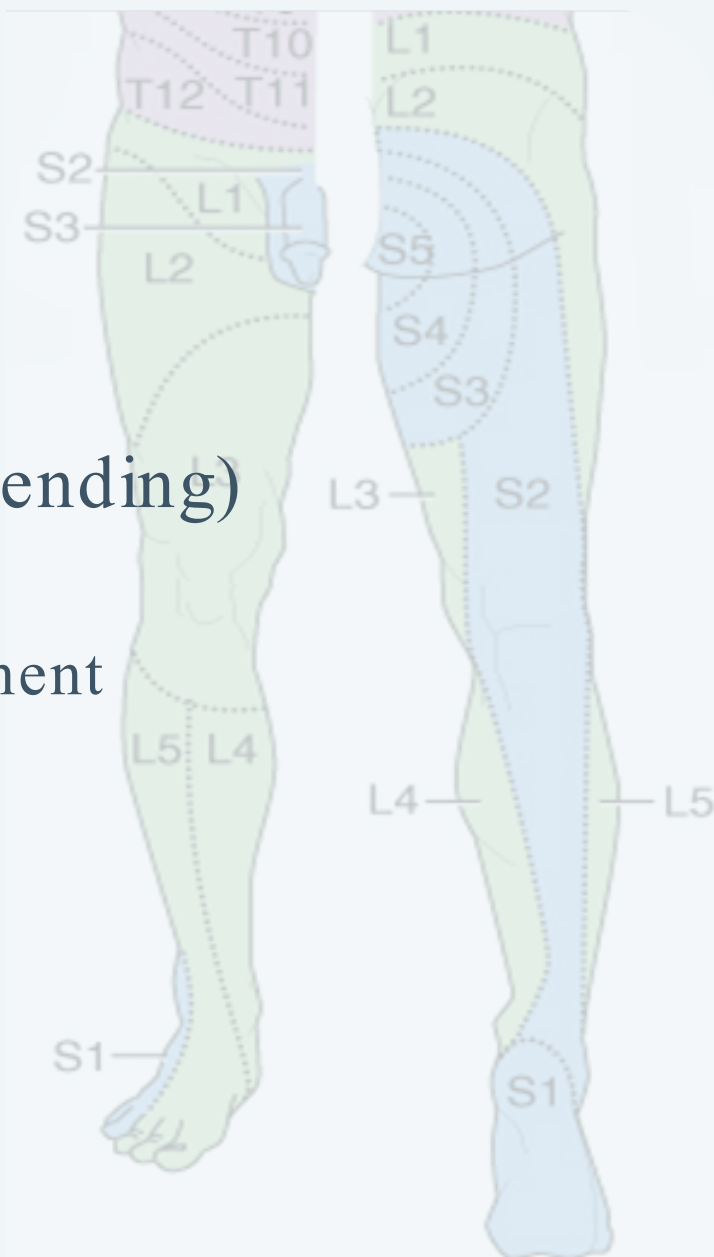
Neurology Advice

- DDx
 - AIDP
 - Atypical GBS
- Transfer FSH
- IMG
 - 40g/day 5 days



Progress

- Patient refused transfer
- Progressive weakness (non-ascending)
 - Wheelchair dependent
 - Nil cranial, truncal or UL involvement
- Minimal response to IMG
- DAMA after 20 days



A tall, vertical sign for the Kalgoorlie Health Campus. The sign is divided into three horizontal sections. The top section is green with a white wavy pattern. The middle section is white with the text 'Kalgoorlie Health Campus' in green. The bottom section is red with the word 'EMERGENCY' in white, followed by a white upward arrow in a circle. Below the red section, on a white background, is the text 'Main Entrance' in black, followed by a black upward arrow in a circle. At the very bottom of the sign is a decorative line of stylized flowers. The sign is set against a blue sky and a building with a yellow and red facade.

Kalgoorlie
Health
Campus

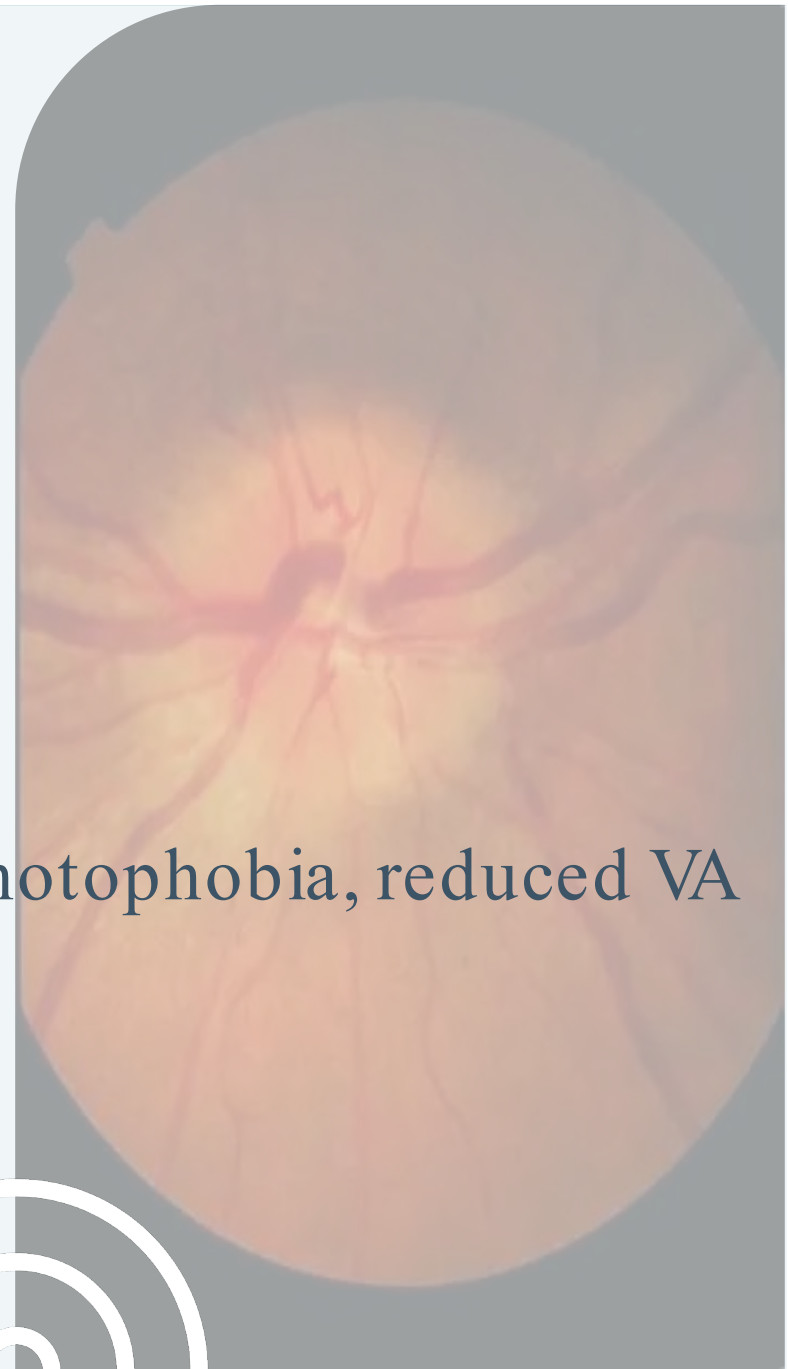
EMERGENCY ↑

Main Entrance ↑

Representation

Three Weeks Later

- Mildly improved LL weakness
 - Wheelchair to 4WW
 - **Brisk** reflexes
- Acute headache, vomiting, photophobia, reduced VA
 - Unilateral right panuveitis
- Transferred to FSH



Tertiary Progress

- Ophthalmology review
 - Panuveitis related to known Sarcoid
 - Commenced on steroid eye drops
- Early discordance in clinical finding
 - DDx Plexopathy vs Myelopathy cf Brisk reflexes
 - D2 DDx Functional Neurological Disorder
 - Hoovers Sign
- No EMG/NCS performed
- D8 CT Guided Lumbar Puncture

Lumbar Puncture

- ↑ Opening Pressure 26cm H₂O
- ↑ Lymphocyte Count 81 x10⁶/L
 - 100% Mononuclear
- ↑ Protein 0.58g/L
- Normal Glucose 3.1mmol
- Biofire Positive

(N<20cmH₂O)

(N<5 x10⁶/L)

(N: 0.15-0.45g/L)

(N: 2.7-4.4mmol)



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- ↑ Opening Pressure 26cm H₂O
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 - **Varicella Zoster Viral DNA**

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(N: 0.15-0.45g/L)

(N: 2.7-4.4mmol)

Elsberg Syndrome

Elsberg Syndrome

- First described in 1913 by Charles Elsberg
- Post infectious sequelae of encephalitis
 - Viral in over 65% cases¹
 - Entero, HSV and VZV most common

Table-VII: Most common causative agents identified, where N= 19.

Sr. #	Infective causes	Number of cases (n)	Percentage occurrence, n/N_1 (%)
1.	Herpes zoster/Varicella zoster virus	7	36.84%
2.	Herpes simplex type-2 virus	7	36.84%
3.	Angiostrongylus cantonensis	2	10.53%
4.	Cytomegalovirus	1	5.26%
5.	SARS-CoV-II	1	5.26%
6.	Unknown	1	5.26%

Herpesviridae

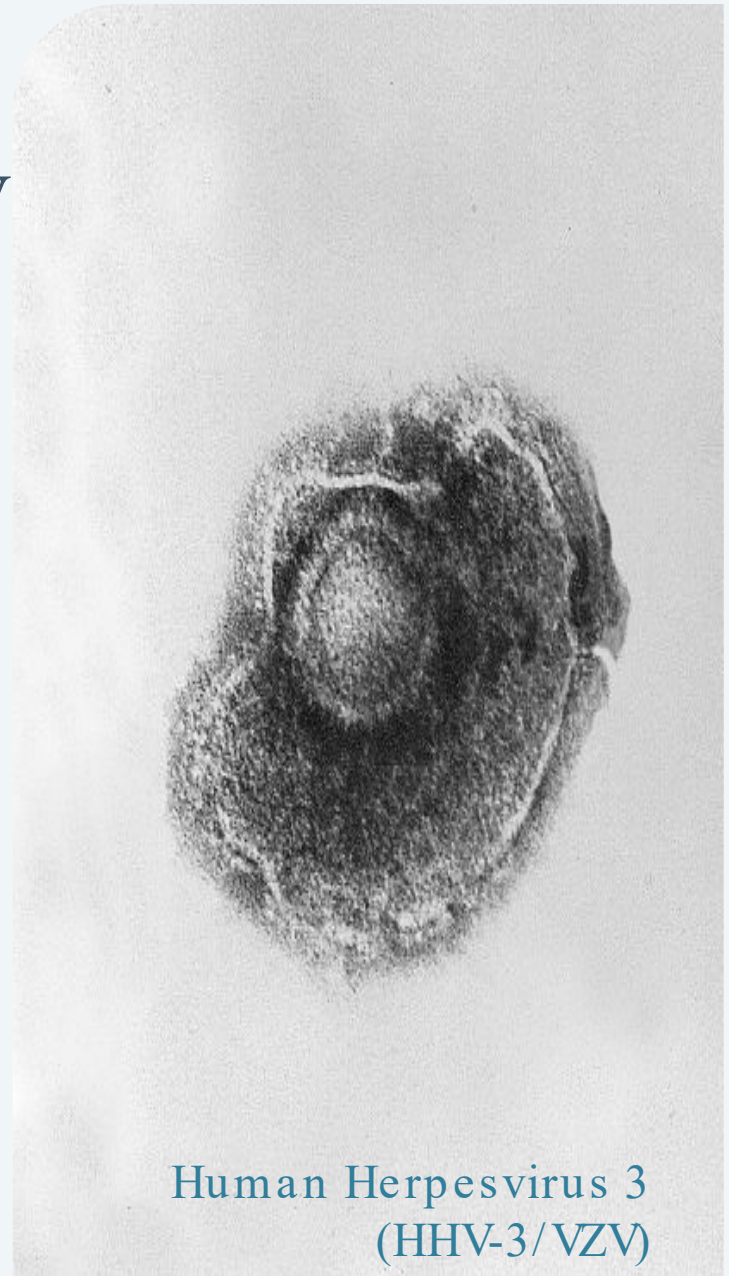
Elsberg Syndrome

- Subacute bilateral lumbar radiculitis
 - May be accompanied by myelitis
 - Can present as isolated syndrome
- 40% have nil MRI finding
- Delays in treatment
 - Ascending myelitis, aseptic meningitis and death²
- Treatment targeted to underlying infectious agent

Back to Our Patient

Progress

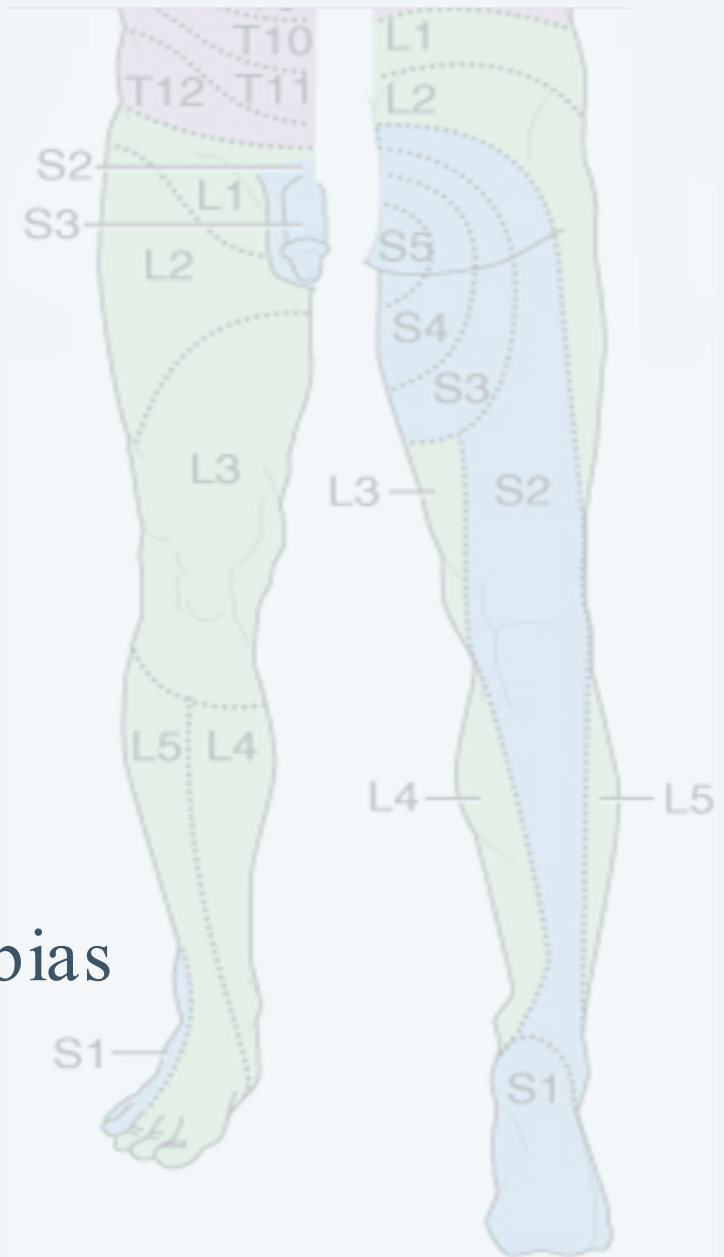
- Corneal Swab Negative for VZV
- IV Acyclovir 1g TDS 3 weeks
- Discharged after 24 days
 - Independent to 50m
 - Stand-by assist for stairs
- 6 month follow up
 - Ongoing improved ambulation
 - Independent at 2km
 - Independent 1 x flight of stairs



Human Herpesvirus 3
(HHV-3/VZV)

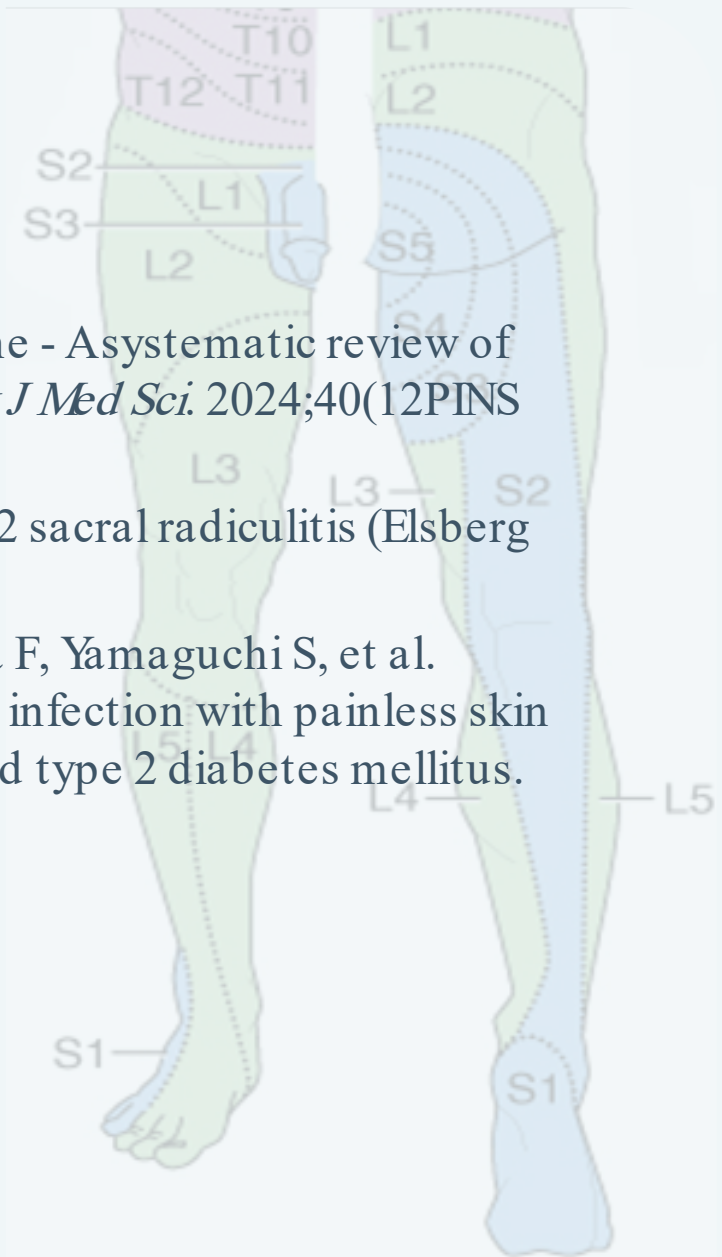
Take Home Message

- Common things are common
 - The rare do occur
- Communication is vital
 - Delay to LP
- History of FND must not cause bias



References

1. Qadri HM, Pervaiz S, Ijaz M, et al. Elsberg syndrome - Asystematic review of existing scientific literature from 2000 - 2023. *Pak J Med Sci*. 2024;40(12PINS Suppl):S103-S113.
2. Eberhardt O, Küker W, Dichgans J, Weller M. HSV-2 sacral radiculitis (Elsberg syndrome). *Neurology*. 2004;63(4):758-759
3. Saito H, Ebashi M, Kushimoto M, Ikeda J, Egashira F, Yamaguchi S, et al. Elsberg syndrome related to varicella zoster virus infection with painless skin lesions in an elderly woman with poorly controlled type 2 diabetes mellitus. *Ther Clin Risk Manag*. 2018;14:1951-1954.





Thank you

The artwork in this publication is the work of Leeann Kelly-Pedersen