

# Hidden in plain sight: isolated neurosarcoidosis unveiled by the “trident sign”

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## BACKGROUND

Atypical phenotypes of sarcoidosis and disease mimics can pose significant diagnostic challenges, underscoring both the strengths and limitations of current diagnostic tools. This is particularly true in neurosarcoidosis, which can affect both the central and peripheral nervous systems, sometimes without any evidence of systemic involvement.

## CASE REPORT

Sex: male; age: 73 years; past history: glaucoma, bilateral hypoacusis and juvenile gout

### PRESENTATION

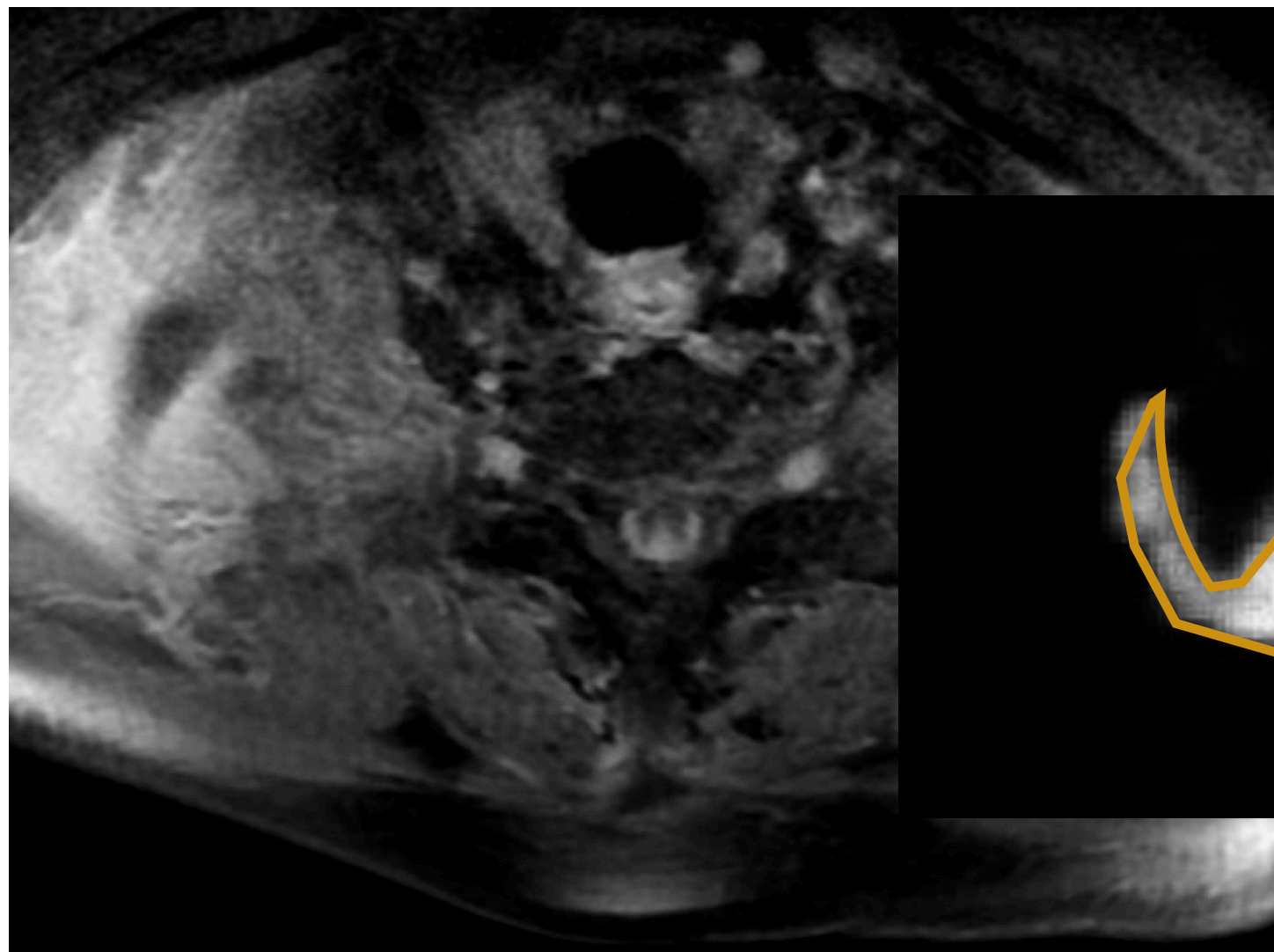
- Subacute, progressive hyporeflexic paraparesis, saddle and lower limb dysesthesia, and sphincter dysfunction.
- MRI: multisegmental, longitudinally extensive myelitis with conus involvement and leptomeningeal enhancement.
- Electrodiagnostic studies (EDX): moderate axonal sensorimotor polyradiculoneuropathy in the lower limbs.
- Cerebrospinal fluid analysis (CSF): marked hyperproteinorrachia, elevated lactic acid, moderate mononuclear pleocytosis, and low glucose.
- Testing for infectious, neoplastic, and autoimmune causes: negative in both CSF and blood, except for intrathecal antibody synthesis.
- Whole-body CT scan: unremarkable.
  - high-dose corticosteroids: notable clinical and radiological improvement, CSF normalization
  - intravenous immunoglobulin: no additional benefit
  - no long-term therapy was initiated at that stage

### PROGRESSION (one month after discharge)

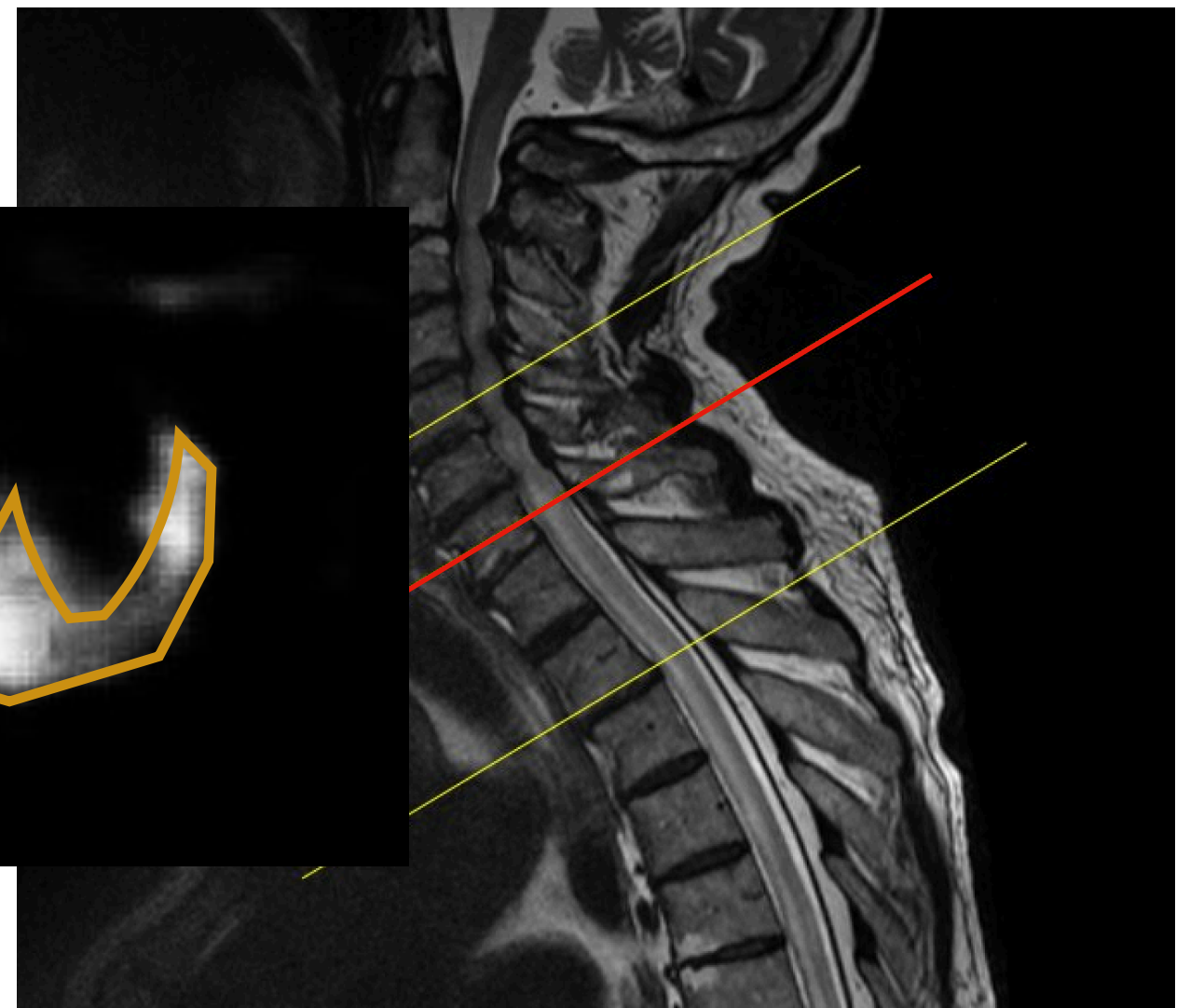
- Areflexic paraplegia and ascending dysesthesia.
- MRI: severe progression of meningomyelitis.
- Whole-body FDG-PET: isolated intense intracanal glucose uptake.
- EDX: progression of polyradiculoneuropathy.
- CSF: mirrored the initial profile.
- Sural nerve biopsy: inconclusive.
  - high-dose corticosteroids: effective again

### DIAGNOSIS

- Retrospective review of spinal MRI: “trident sign”.
- Personal history update: biopsy-confirmed pulmonary and hepatic sarcoidosis diagnosed over 30 years earlier.
  - methotrexate and prednisone taper: stabilization, no relapse to date



Axial T1 post-gadolinium



Sagittal T2

## CONCLUSION

In neurosarcoidosis, where histology is often unavailable or inconclusive, diagnosis relies on the integration of multisource findings. At times, a seemingly minor detail provides the crucial diagnostic insight. A diagnosis is never achieved without consistent communication with the patient and family.

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### References

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