

Teaching NeuroImage: Fluorosis

A Forgotten Cause of Compressive Myelopathy

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Figure 1 Fluorosis-Interosseous Membrane Calcification



X-ray bilateral forearm (AP view) showing interosseous membrane calcification (yellow marker).

A 26-year-old man having restricted neck movements for 4 years developed progressive quadriplegia with bladder-bowel involvement over 15 days. His parents and local village residents reported similar symptoms. Hemogram and biochemistry (including vitamin D) analysis were normal. X-ray bilateral forearm showed interosseous membrane calcification (Figure 1). Bone densitometry at distal radius showed a Z score of -2.5 . MRI cervicodorsal spine revealed multilevel disco-osteophytic complexes at C3-C4 and C6-C7 with ossified ligamentum flavum causing cord compression (Figure 2). Excess drinking water fluoride causes osteoblast and osteoclast activation resulting in periosteal tissue ossification and immature bone deposition. Sclerosed ligaments/osteophytes due to fluorosis can cause compressive myelopathy in endemic areas.^{1,2}

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Figure 2 Compressive Cervical Myelopathy due to Fluorosis



MRI cervical spine (T2 sagittal sequence) showing ossification of dens (yellow marker) and disco-osteophytic complex at the level of C3-C4 (blue marker) causing cord compression.

Disclosure

A. Saluja, R.K. Dhamija, and R.S. Solanki report no disclosures relevant to the manuscript. Go to [Neurology.org/N](https://www.neurology.org/N) for full disclosures.

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Name	Location	Contribution
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