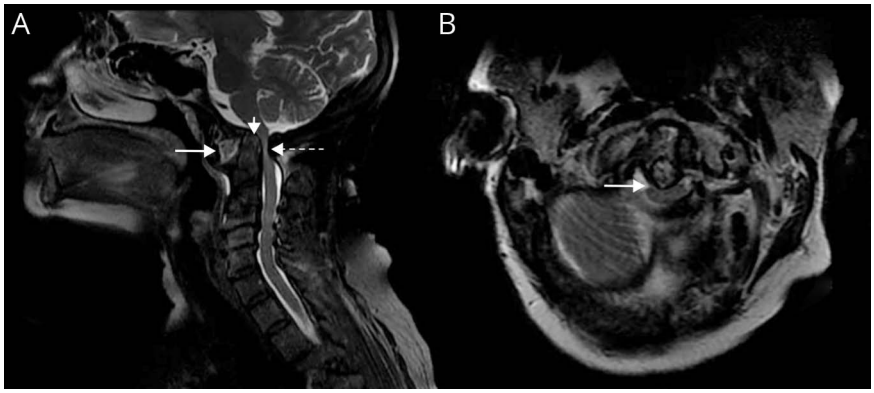
Teaching Video NeuroImage: Dissociation of Abdominal Reflexes in Rheumatoid Atlantoaxial Subluxation

Igor Vilela Brum, MD, and Guilherme Diogo Silva, MD

Neurology® 2022;98:e211-e212. doi:10.1212/WNL.0000000000013007

Correspondence
Dr. Brum
igor.brum@hc.fm.usp.br

Figure Spinal Cord Compression by Atlantoaxial Subluxation and Retrodental Pannus



T2-weighted sagittal (A) spine MRI showing spinal cord compression and high signal intensity at the level of C1-C2 (dashed arrow) because of anterior subluxation of the atlas (solid arrow) and retrodental pannus (small arrow) in a patient with rheumatoid arthritis. T2-weighted axial (B) image confirms spinal cord compression by atlantoaxial subluxation (arrow, B).

A 59-year-old woman with rheumatoid arthritis presented with progressive gait difficulties and electric shock-like pain triggered by neck flexion (Lhermitte sign) for more than 6 months. On examination, she had hyperreflexia in the 4 limbs and brisk deep abdominal reflexes with absent superficial abdominal reflexes (reflex dissociation) (Video 1). MRI showed spinal cord compression resulting from anterior subluxation of the atlas and retrodental pannus (synovial tissue proliferation) (Figure). Superficial abdominal reflexes may be absent in 20% of normal individuals.[1] However, the dissociation of abdominal reflexes suggests an upper motor neuron lesion above the T6 spinal segment.[2]

MORE ONLINE

Teaching slides
links.lww.com/WNL/B633

Video

Study Funding
The authors report no targeted funding.

Disclosure
I.V. Brum reports no disclosures relevant to the manuscript; G.D. Silva reports no disclosures relevant to the manuscript. Go to Neurology.org/N for full disclosures.

From the Department of Neurology, University of Sao Paulo, Brazil.

Go to Neurology.org/N for full disclosures.

Appendix Authors

Name	Location	Contribution
Igor Vilela Brum, MD	Department of Neurology, University of Sao Paulo, Brazil	Drafting/revision of the manuscript for content, including medical writing for content, major role in the acquisition of data, study concept or design, and analysis or interpretation of data
Guilherme Diogo Silva, MD	Department of Neurology, University of Sao Paulo, Brazil	Drafting/revision of the manuscript for content, including medical writing for content

References

1. Madonick MJ. Statistical control studies in neurology: 8. The cutaneous abdominal reflex. *Neurology*. 1957;7(7):459-465.
2. Teasdall RD, Van Den Ende H. A note on the deep abdominal reflex. *J Neurol Neurosurg Psychiatry*. 1982;45(4):382-383.

Teaching Video NeuroImage: Dissociation of Abdominal Reflexes in Rheumatoid Atlantoaxial Subluxation

Igor Vilela Brum and Guilherme Diogo Silva

Neurology 2022;98;e211-e212 Published Online before print October 21, 2021
DOI 10.1212/WNL.0000000000013007