

INTRODUCTION

Ankylosing spondylitis commonly presents with some form of lower back pain of insidious onset that improves with exercise in the young male population. This case aims to highlight the atypical presentation that initially may be concerning for a CNS tumor or other potentially life-threatening causes, such as Guillain-Barré syndrome. In addition, it highlights the unique exacerbation of this disease process due to a common acne medication, doxycycline.

CASE SUMMARY

History: A 17-year-old male presented to the psychiatry clinic with a 7-month history of unintentional weight loss, progressive leg weakness, and back pain. He was found to be hyperreflexic on exam, which was concerning for CNS tumor. He underwent an emergent MRI of the brain and spinal cord, which was normal. He was admitted to the hospital for additional work up, including nerve conduction study and extensive lab work which revealed elevated chromatin antibody, ANA antibody ratio, ESR and CRP, with positive HLA-B27 antigen. Rheumatology was consulted and ultimately made a diagnosis of Ankylosing Spondylitis, beginning treatment with systemic anti-inflammatories and steroids, with rapid improvement in his pain and gait changes.

Patient Outpatient Medication: Oracea 40 mg capsule

CASE SUMMARY (continued)

Pertinent Physical Exam Findings:

General - Positive for fatigue (due to difficulty sleeping at night due to joint pain and stiffness) and unexpected weight change (15 lb weight loss since fall of 2020)

Neuro - reflexes 3+ at the bilateral patellae, hamstring tendon, suprapatellar reflexes, and Achilles. 1-2 beats ankle clonus bilaterally

MSK - 4/5 in bilateral hip flexors, adductors, abductors, quads, hamstrings, ADF, right APF, bilateral ankle inversion. 3+/5 in left ankle DF, bilateral ankle eversion, plantar flexion. Difficulty with sit to stand (without using arms, unable to perform). Positive for arthralgias and back pain

Review of systems:

Musculoskeletal: positive for gait changes, muscle weakness and atrophy, no muscle pain, no fractures

Nerve Conduction Study

Site	Onset	Norm Onset	Amplitude	Norm Amplitude	Velocity (m/s)	Norm Velocity
Right Sural	4.3	<4.0	8	>5	33	>35
Left Sural	4.2	<4.0	7	>5	33	>35
Right Fibular	5.0	<6.1	7.6	>2	47	>38
Left Fibular	4.0	<6.1	5.3	>2	41	>38
Right Tibial	4.6	<6.1	9.6	>4.4	45	>39
Left Tibial	5.0	<6.1	9.3	>4.4	50	>39

Normative data based on age 15-18 years old (from Mayo Clinic data pools). Green indicates that the data is within normal limits (within 2 SD's), and red indicates that the value lies outside of 2 SD's from age-matched normal values.

DISCUSSION

This uncommon presentation is important to note as the patient struggled with muscle atrophy with resultant weakness, weight loss, and depression related to his inability to participate in sports. Without prompt recognition and treatment, this would progress to ongoing debility and functional decline.

Rapid identification of his condition could have prevented such significant decline and allowed for a faster recovery.

This case serves to highlight the presence of abnormal physical exam findings despite normal MRI results of the spine. Hyperreflexia may be expected in patients with spinal cord compression, but that was not the case in this patient. Additionally, it should bring to light the possibility of medications acutely worsening the disease process.

Further research should aim to identify the mechanism behind hyperreflexia in ankylosing spondylitis without myelopathy seen on MRI, as well as the mechanism behind doxycycline exacerbation of the disease process. Other common medications should be studied to elucidate whether they are contraindicated in the management of ankylosing spondylitis.

REFERENCES

- Wenker KJ, Quint JM. Ankylosing Spondylitis. [Updated 2020 Jul 13]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2021 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK470173/>