Atypical presentation of myasthenia gravis with associated myofascial pain symptoms.

Niki Song, BA; Carmen Chen, BS; Anusha Lekshminarayanan, MD; Mohammad Islam, MD

CLINICAL PRESENTATION

History:
A 53-year-old Caucasian female with history of papillary thyroid cancer status post resection, hypothyroidism, migraine, and myasthenia gravis (MG) presented with **new-onset bilateral upper and lower extremity pain and weakness.** Muscle fatigue was exacerbated with exertion and acutely worsened over 1-2 weeks, resulting in limited ambulation and difficulty climbing stairs. Patient also endorsed associated **intermittent vertigo, difficulty with chewing (bulbar symptom), and blurred vision**. She was diagnosed with MG in Hungary nine years ago and has been managed on **pyridostigmine.**

Physical exam:
On exam, she had diffuse muscle tenderness, fatigability of proximal muscles with repetitive movement, and decreased sensation in upper extremities. **No ptosis** was present.

Labs and imaging:
Bloodwork was significant for **elevated CRP** but **negative for AchR antibodies, ANA, ESR, P/Q type Ca channel antibody and CK**.
EMG with repetitive stimulation at 20 Hz showed **decrement.**
Recent neck ultrasound showed no residual thyroid tissue or tumor recurrence.
Cervical X-ray showed possible muscle spasm (figure 1).

IMAGING

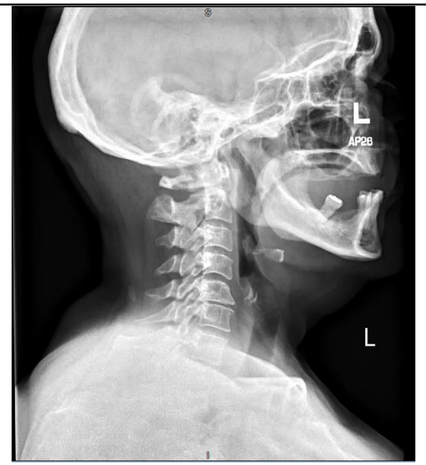

Figure 1. Cervical X-ray showing possible muscle spasm and degenerative disc disease

DISCUSSION

The clinical presentation of **generalized MG in the absence of AchR Ab** is rare and only seen in **15%** of patients with the disease. Nearly half of the patients with AChR-Ab negative MG will have **MuSK antibodies.** Further antibody tests like MuSK and LRP4 could be beneficial to investigate this patient's diagnosis. Additionally, coexistence of **thyroiditis and MG** is **uncommon**. A population-based cohort study showed a positive association between thyroid disorders and MG at a rate of 0.25-4.37%. Our patient has a history of thyroid cancer, which the study showed an association rate of **0.34%**.

CONCLUSIONS

We present an **atypical presentation of myasthenia gravis** (without ocular symptoms and negative AChR Ab) in a patient with a history of **thyroid cancer** with overlapping features of **myofascial pain syndrome**. To date, very few studies report associations between myasthenia gravis and myofascial pain syndrome.

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