

# Memory Impaired Myalgia

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## Abstract

As physicians we need to take into context other etiologies of injury in relation to their surrounding environment. Pain was localized in her anterior thighs with referred pain in her lower back, without neck pain or stiffness. According to her spouse, she was not sleeping at night due to worsening thigh pain and appeared very tired with intermittent episodes of confusion. Hypertonic saline was used to correct her hyponatremia.

**Keywords:** Environmental • Hyponatremia • Treatment • Diagnosis

## Introduction

Outdoor athletes are prone to many environmental risk factors that can cause injury. When these athletes present with confusion and myalgia that does not improve, one must quickly broaden their differential diagnosis. As physicians we need to take into context other etiologies of injury in relation to their surrounding environment [1].

## Case Presentation

67 years old female recreational jogger with history of hypothyroidism, presented with a fever of 102.4 F, sore throat, and acute onset bilateral thigh pain that worsened over the course of 10 days. Pain was localized in her anterior thighs with referred pain in her lower back, without neck pain or stiffness [2]. According to her spouse, she was not sleeping at night due to worsening thigh pain and appeared very tired with intermittent episodes of confusion [3]. Her spouse initially thought that the thigh pain was from running and treated her conservatively with rest and analgesics at home. However, since thigh pain and episodes of confusion did not improve, she sought medical attention via synchronous real-time audio and visual communication with her Primary Care Sports Medicine physician [4].

### Physical examination

**Due to COVID-19 pandemic:** Virtual visit findings, no vitals were taken.

**HEENT:** Atraumatic, eyes moist, no proptosis, no visible neck mass or goiter, no myxedema, no oral lesions, no throat exudate, Neck full flexion.

**Skin:** Facial rosacea to nose, pink papules noted on bilateral scapulas and on upper back.

**Back:** Scapular dysfunction on right, no discoloration or malalignment, tender to self-palpation, muscles spasms on right mid back. Forward flexion within normal limits.

**Extremities:** Tender to self-palpation of trochanters; thighs tender to palpation, with no palpable masses or muscle defect.

**Neurological:** Normal gait with heel/toe walking, and tandem walking.

**Mental status:** Initially confused, then became more lucid as interview progressed.

### Broad diagnosis

Viral myalgia, Bacterial meningitis, Rhabdomyolysis, COVID-19 infection, Hypothyroid myopathy.

### Lab studies

CBC within normal limits, CMP significant for Na 130, ESR 6, CK 42, TSH initial 7.39, repeat 13.7, Free T4 1.06 COVID-19 PCR negative.

West Nile Virus Ab IgG and IgM Positive.

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## Final working diagnosis

West Nile Virus infection with viral myositis, encephalopathy, and SIADH.

## Treatment

Hyponatremia and confusion worsened, and she required hospitalization. Hypertonic saline was used to correct her hyponatremia. CT Head showed mild cerebral atrophy, and CT L-spine showed degenerative disc disease with L4/L5 disc protrusion.

## Return to activity and follow-up

- Brisk walking 30-40 minutes per day at one month after initial presentation Physical therapy (12 visits) for lower back and thigh pain.
- At 1 year, post infection she is able to jog on indoor track, but due to problems with post infectious spatial orientation and tendency of getting lost, she was not able to participate in solo trail running (Figure 1).



**Figure 1:** Viral myositis.

## Discussion

For outdoor athletes who present with myalgia, fever, and episodic confusion, consider the differential diagnosis of West Nile Virus infection. Outdoor sports such as trail running can increase exposure to such vector borne diseases. Humans typically acquire West Nile virus through a bite from an infected adult mosquito of the *Culex* species. In the U.S.A this virus is maintained in an enzootic mosquito-bird-mosquito cycle [5,6].

## Conclusion

It is important to wear long sleeve shirts and pants, and the use of mosquito repellent to minimize exposure. Clinical management for West Nile Virus is supportive, and most individuals recover completely. Symptoms such as fatigue, confusion, and muscle pain can persist for weeks to months or longer.

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