

The Complex Regional Pain Syndrome (CRPS) Conundrum - Clinical Judgment vs. Paradoxical Scans: A Case Report

Authors: Karthik Kamath, DO, Elliott Berry, MD, Leslie Wong, DO, Jenzel Espares, DO, Peter Atallah, DO, Ajendra Sohal, MD

Department: Physical Medicine and Rehabilitation (PM&R)

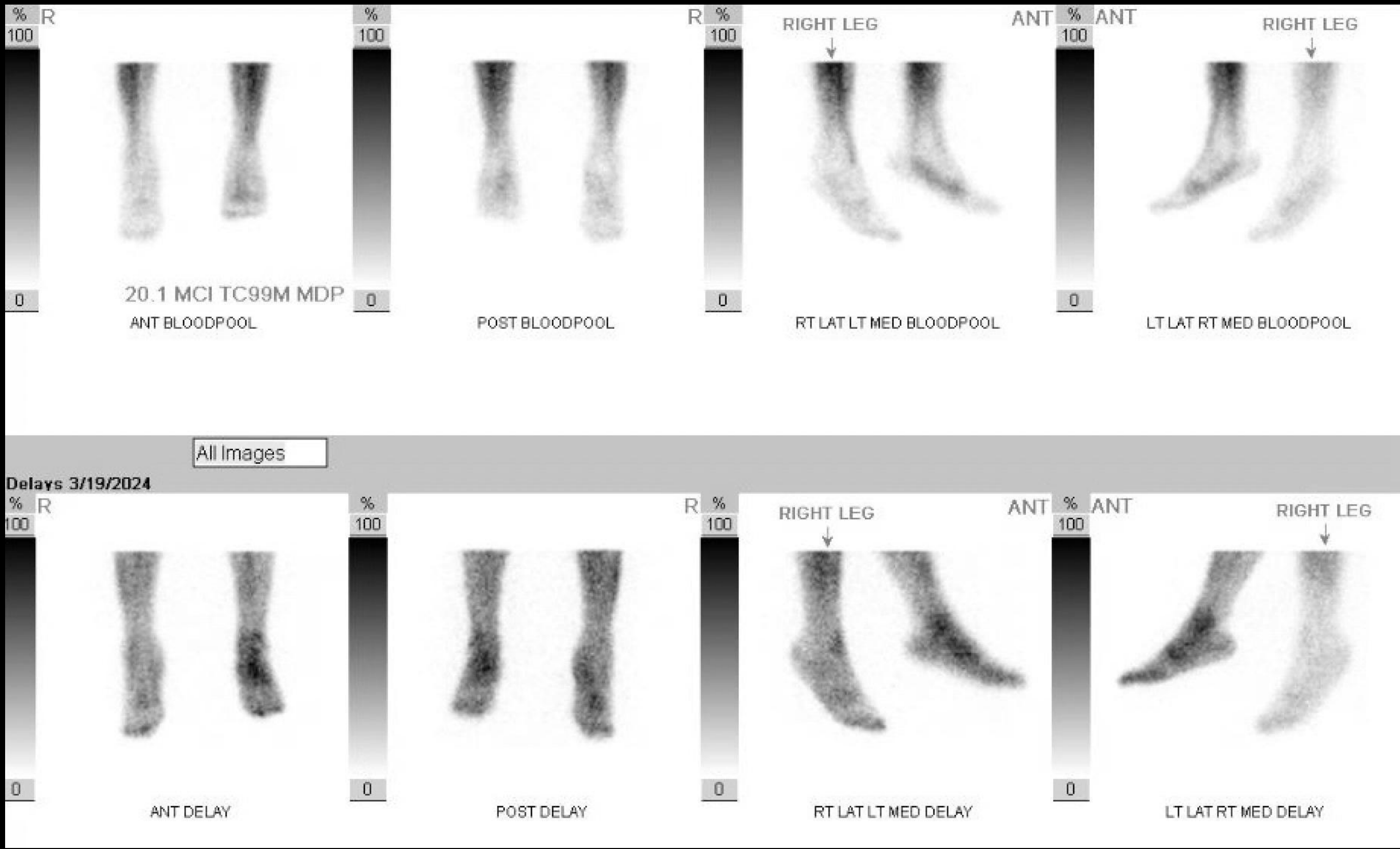
Introduction

33-year-old male presented to the emergency room after a motor vehicle collision where he was a restrained driver. He denied loss of consciousness but complained of back, bilateral leg, and right hand/wrist pain. A pan scan revealed a small subdural hemorrhage. After stabilization, he was deemed suitable for acute inpatient rehabilitation. Throughout his admission, he experienced severe right foot/ankle pain with allodynia and hyperalgesia, avoiding weight-bearing on the extremity. Pain management included gabapentin, duloxetine, and oxycodone. Mild to moderate right lower extremity swelling developed, with negative X-rays for fracture and vascular dopplers for DVT. Meeting Budapest criteria, he was diagnosed with complex regional pain syndrome (CRPS) and discharged home with outpatient PT and pain management follow-up for potential intervention.

Materials and Methods

As the case report is devoid of patient identifiable information, it is exempt from IRB review requirements as per Nassau University Medical Center policy.

Triple Phase Bone Scan



Results

Lumbosacral plexus MRI showed a compressed appearance of the right L5 nerve, likely due to anatomical variation. Triple Phase Bone Scan indicated decreased activity on the symptomatic side. EMG was technically challenging due to hypersensitivity and edema but revealed no significant abnormalities. MRI of the right foot and ankle showed soft tissue edema without fractures or ligament injuries.

Discussion

This case underscores that CRPS is diagnosed clinically. After ruling out other possibilities, the patient met the criteria with pain and tissue texture changes. The triple-phase bone scan showed higher radiotracer uptake on the non-symptomatic side. This is typically the opposite findings of CRPS. A possible reason for this anomaly could be the excessive weight-bearing demands on the healthy extremity as the patient compensates and guards the affected extremity. In this case, the patient strongly avoided bearing weight on the right lower extremity due to pain and the anticipation of pain. Healthcare professionals must depend on their clinical expertise to diagnose uncommon conditions such as CRPS, rather than solely on imaging. While bone scans can confirm CRPS, a negative result does not eliminate the possibility of the condition. Prompt recognition of clinical signs and symptoms is crucial for improving prognosis and quality of life through timely treatment, as misdiagnosis or delayed diagnosis can lead to significant disability.

References

