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Rhabdomyolysis Involving Gluteal Compartment Followed by Sciatic Neuropathy and CRPS: A Case

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Introduction

Sciatic neuropathy is a rare complication of rhabdomyolysis around the hip region. We experienced a complicated sciatic neuropathy after rhabdomyolysis involving gluteal compartment and reported it.

Case

A 44-year-old man visited the emergency room with right buttock pain and leg weakness. His buttock was tense and tender. His serum showed creatine kinase level of 30,719 IU/L. No myoglobinemia was detected. Hip MRI showed followed: 1) edematous swelling of right gluteus maximus with suspicious necrosis and hemorrhage, 2) diffuse edematous swelling of the right sciatic nerve from pelvis to visible proximal thigh level.(Fig 1) Electrodiagnostic study showed incomplete injury of right sciatic nerve. Ultrasonography of sciatic nerve showed nerve swelling with increased cross sectional area.(Fig 2) He was diagnosed rhabdomyolysis involving gluteal compartment associated sciatic neuropathy. 10 days later, he complained of newly onset pain on the right sole with allodynia. 3-phase bone scan elicited increased radio-uptakes on the right foot and ankle.(Fig 3) We diagnosed complex regional pain syndrome type 2 on the right leg. Oral steroid therapy with prednisolone 60mg for 4 days started and tapering for 11 days. After first therapy, foot pain gradually aggravated, then the second steroid therapy was done with the same regimen. After steroid therapy, his pain was controlled with some analgesics (gabapentin, tramadol) and could ambulate without any aid.

Conclusion

Rhabdomyolysis invading gluteal compartment may make complicated sciatic neuropathy. It is a kind of gluteal compartment syndrome.

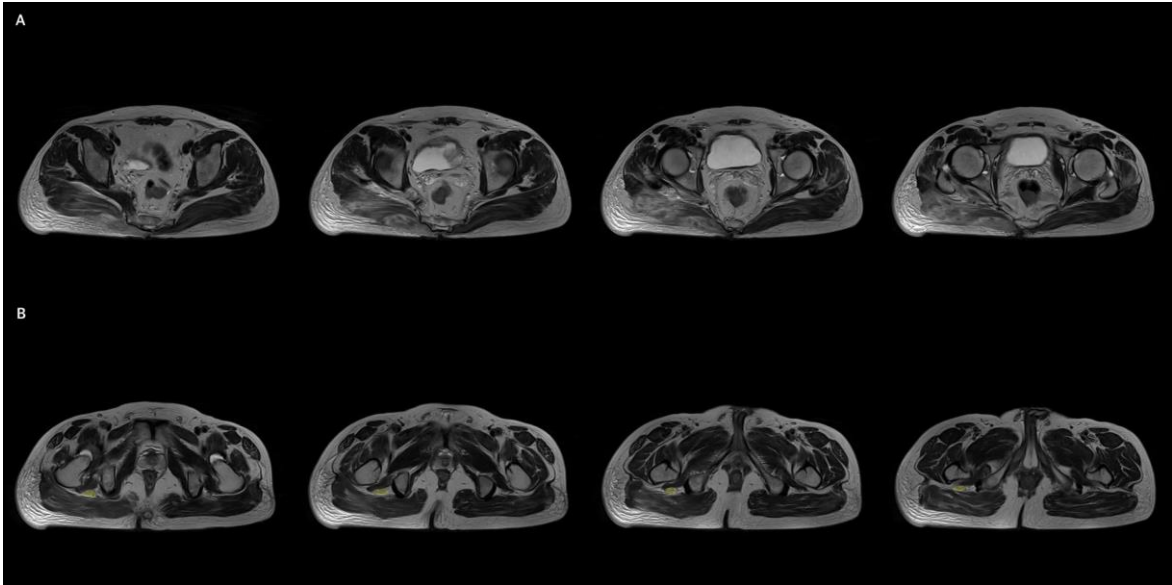


fig1. T2WI of hip MRI. Edematous swelling of right gluteus maximus(A) with diffuse swelling of right sciatic nerve(B)

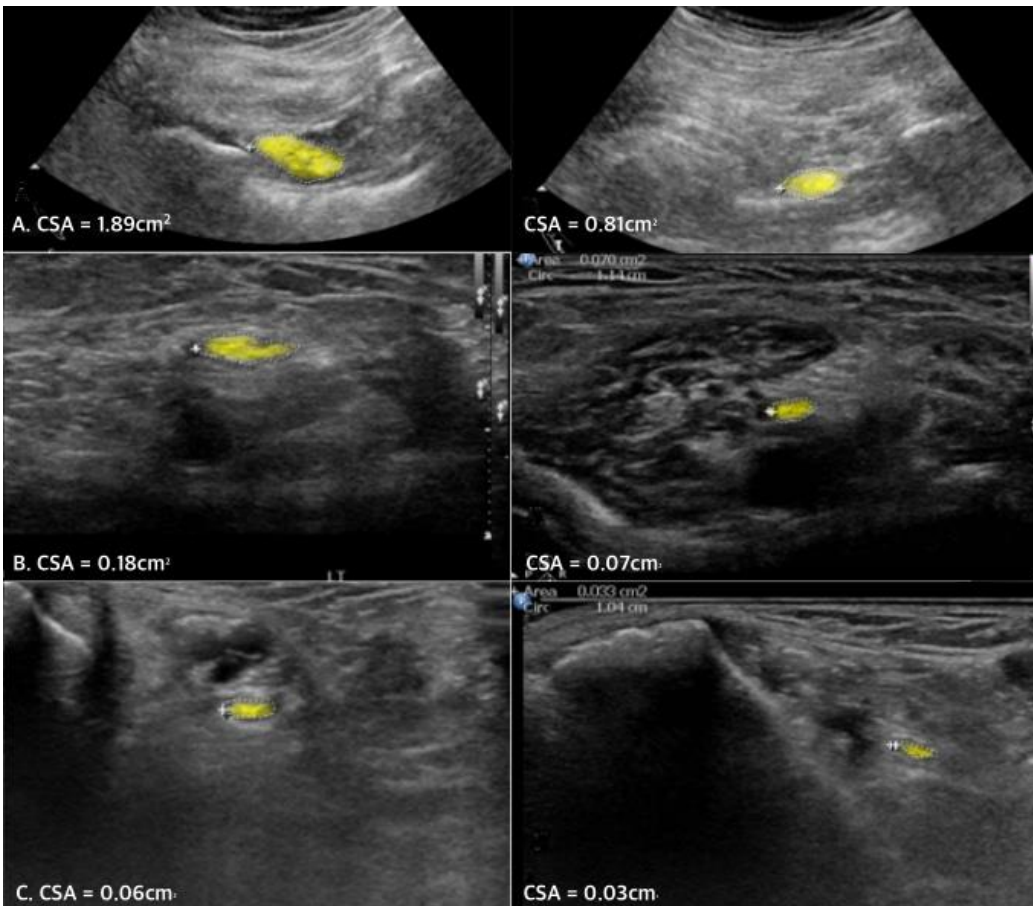


fig2. Ultrasonography of Sciatic nerve at the gluteal fold(A), popliteal fossa(B) and the ankle(C). CSA of right sciatic nerve is larger than the left.

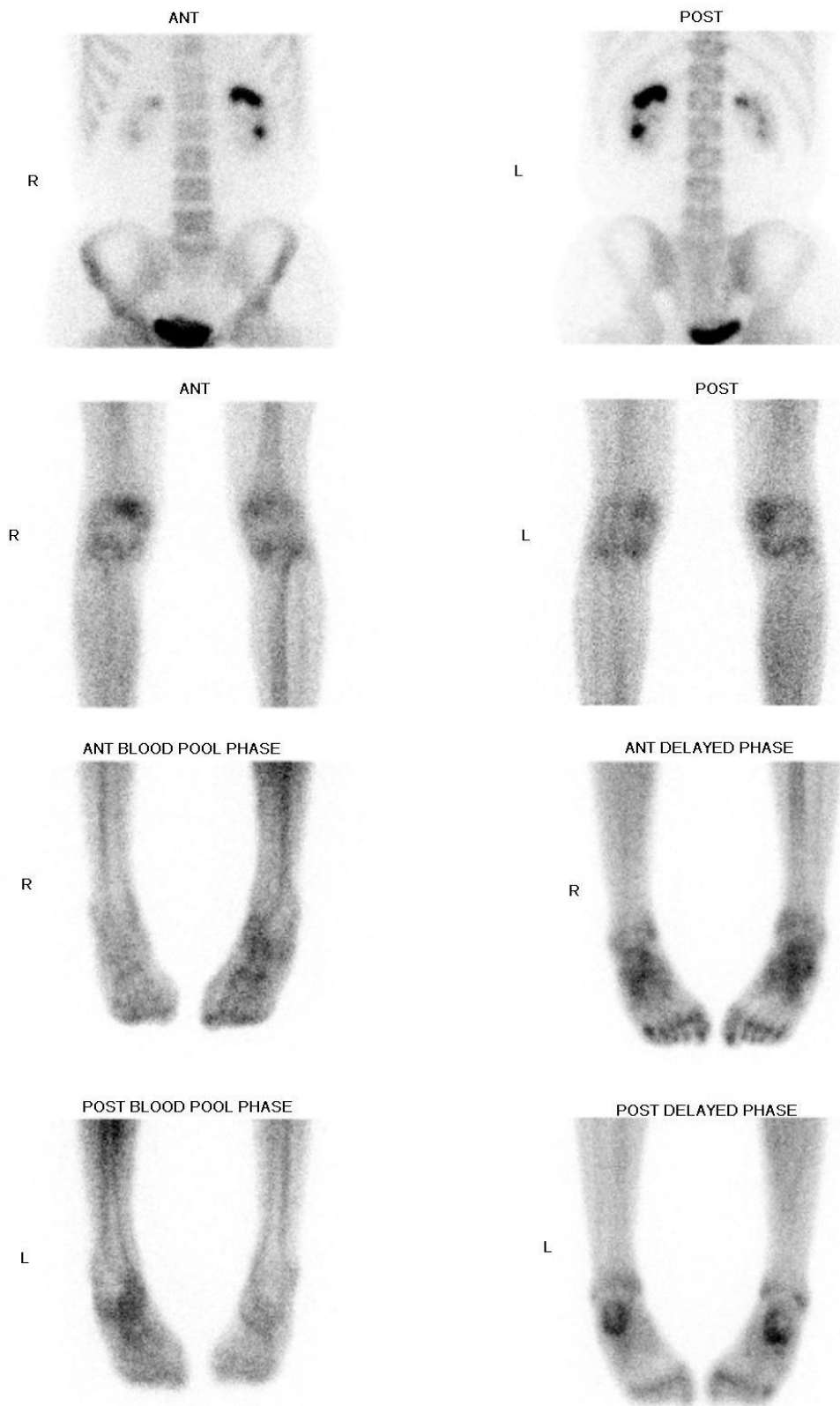


fig3. 3-phase bone scan. Increased uptake at the blood pool and delayed phase at the left knee and ankle.