# Rhabdomyolysis: An Unusual Presenting Symptom of Hypothyroidism

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# Rhabdomyolysis: An Unusual Presenting Symptom of Hypothyroidism

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## INTRODUCTION:

A 28 year-old-male presented due to one week of ongoing fatigue and weakness of his distal arms and legs. He denied any trauma, illness, or use of any medications. He did admit to a 20 pound weight gain within the past month. On exam, he had nonpitting edema of all extremities, most significant in his right forearm, with normal range of motion and muscle strength.

## METHODS:

Routine labs were ordered, revealing a creatine kinase (CK) level of 3482, elevated inflammatory markers, creatinine, and transaminases. Additional tests were ordered to identify the cause of the rhabdomyolysis, including thyroid stimulating hormone (TSH), vitamin D level, anti-nuclear antibodies (ANA) as well as a panel of myositis specific antibodies, angiotensin converting enzyme, and an HIV screening test. Rheumatology was consulted to determine if a muscle biopsy was necessary.

## RESULTS:

Results returned positive for a TSH of 242, T4 of 0.16 and a low vitamin D level; the remaining tests were normal. An MRI was completed of his right forearm which only revealed mild superficial edema without evidence of myositis. The patient had a modest improvement of his CK levels and creatinine with intravenous fluids and was discharged on levothyroxine and vitamin D.

Non pitting edema of extremities due to severe hypothyroidism

## CONCLUSION:

In most cases of rhabdomyolysis secondary to hypothyroidism, a precipitating factor is identified. In this case, overt hypothyroidism is the only discernible cause of rhabdomyolysis and acute kidney injury. This reinforces that any patient presenting with elevated CK levels should be tested for thyroid disorders early. If thyroid function is low, thyroid replacement therapy should be initiated and CK levels should be monitored for resolution. Further work-up for autoimmune polymyositis or viral etiologies is not indicated and should only be pursued if symptoms do not improve upon CK normalization. Muscle biopsy is an unnecessary invasive step for a patient with hypothyroid induced rhabdomyolysis.

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