IMAGES IN CLINICAL MEDICINE

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# Hypothyroid Myopathy with Muscle Pseudohypertrophy


A 35-year-old man presented to the medical ward with a 2-year history of progressive weakness in his arms and legs associated with intermittent muscle cramping. He also had fatigue, weight gain, and constipation. Despite his symptoms, he had been able to continue his work as a cattle herder. Vital signs were normal. On physical examination, the patient appeared fatigued. Macroglossia (Panel A) and enlargement of the muscles in both calves (Panel B) were observed, but no enlargement of muscles in the arms was seen. He had proximal muscle weakness in the arms and legs and decreased deep-tendon reflexes with delayed relaxation. Laboratory testing showed a considerably elevated thyrotropin level and low levels of free thyroxine and triiodothyronine. The creatine kinase level was 7087 U per liter (reference range, 55 to 170), and the thyroid peroxidase antibody level was markedly elevated. A diagnosis of hypothyroid myopathy with muscle pseudohypertrophy (also known as Hoffman's syndrome) in the context of severe hypothyroidism due to Hashimoto's thyroiditis was made. Muscle pseudohypertrophy in hypothyroidism results from altered muscle-fiber composition and the accumulation of glycosaminoglycans in the muscle tissue. Treatment with levothyroxine was initiated. At 3 months of follow-up, the muscle weakness had resolved, but the muscle pseudohypertrophy persisted.

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