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CASE REPORT

A Rare Case of Dermatomyositis with Hyponatremia

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ABSTRACT

Dermatomyositis is a rare type of inflammatory myopathy that represents the largest group of acquired and potentially treatable cause of skeletal muscle weakness. It is characterized by chronic muscle inflammation accompanied by muscle weakness. Here, we present a case of an elderly female who presented with a history of pain in bilateral arm, forearm, thigh, and leg associated with swelling and with a history of rash over the upper extremities. On examination, edema with tenderness was present on both upper limb and lower limb. We also noticed erythematous rash over the arm, forearm, nose, and forehead. Investigations showed hyponatremia, with elevated Cretatinc phosphokinase levels. Hence, a provisional diagnosis of hyponatremia-induced rhabdomyolysis was made. On further evaluation, urine for myoglobin was negative, and in view of the accompanying rash and minimal improvement with sodium correction a provisional diagnosis of dermatomyositis with hyponatremia/hyponatremia-induced rhabdomyolysis was made. Diagnosis of dermatomyositis was confirmed by the muscle biopsy. Dermatomyositis may be accompanied by hyponatremia and atypical rash. It can also be confused with hyponatremic rhabdomyolysis. Dermatomyositis is also a rare presentation and it may be a paraneoplastic manifestation.

Keywords: Dermatomyositis, Hyponatremia, Myopathy.

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INTRODUCTION

Dermatomyositis is a rare type of inflammatory myopathy that represents one of the largest groups of acquired and potentially treatable cause of skeletal muscle weakness. It is characterized by chronic muscle inflammation accompanied by muscle weakness. Inflammatory myopathy's prevalence rate is estimated to be around 1 in 1,00,000.[1] The disease affects both adults and children. It is more prevalent in women than men. The cutaneous manifestation of dermatomyositis is often distinctive, but at times they may resemble those of systemic lupus erythematosus, scleroderma, or other overlapping connective tissue diseases. The cutaneous manifestations are similar both in children and elderly.

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CASE REPORT

An elderly female with recently detected hypertension presented with a history of acute onset pain in arms, forearms, thighs, and legs associated with swelling and presence of rash over the upper extremities. Patient had weakness in the form of difficulty in lifting her arms above the head, difficulty in combing hair, and also getting up from a squatting position and difficulty in climbing stairs, which was acute in onset and gradually progressive. Except for telmisartan started for hypertension recently, patient was not on any other medications. On general examination, patient had erythematous rash (+) over the arm, forearm, nose, and forehead. Edema of both upper and lower extremities was present, mainly over the proximal muscle associated with tenderness. Systemic examination showed weakness mainly in the shoulder girdle and hip girdle muscle with no dysphagia or dyspnea. On examination of the nervous system, the cranial nerves and the sensory system were normal. No abnormality was detected in other systems. On investigating, the patient was found to have hyponatremia, serum osmolality: 248 mOsm/kg (normal: 275–295), urine osmolality: 542 mOsm/kg, CPK levels were elevated (3166 IU/L) (normal: 25–192 IU/L), TSH: 0.6 uIU/mL, serum creatinine: 1.2 mg/dL, serum potassium: 4.5 meq/L. In view of hyponatremia and raised CPK levels, differential diagnosis of dermatomyositis with hyponatremia/hyponatremia-induced rhabdomyolysis was considered. On urine examination, myoglobin was absent. However, in view of the accompanying rash and minimal improvement in spite of sodium correction, we considered the differential diagnosis of dermatomyositis with hyponatremia or occult malignancy with paraneoplastic syndrome. Neurologist opinion was taken and patient was planned for muscle biopsy. The diagnosis of dermatomyositis was confirmed by muscle biopsy. Patient was screened for occult malignancy and was found to be negative.

DISCUSSION

Dermatomyositis presenting with hyponatremia is an uncommon manifestation. There have been several reports that have discussed myositis associated with various cancers like breast cancer.[2] The prevalence of

myositis with syndrome of inappropriate antidiuretic hormone (SIADH) is very rare.

Myositis associated with malignancy includes dermatomyositis and polymyositis. Dermatomyositis presents with proximal muscle weakness and skin changes with classic findings of a heliotrope rash and gottron papules.[3] The pathophysiology of dermatomyositis associated with cancer is not clearly understood. The main contributing factor is thought to be an immune system imbalance with a failure in immunological surveillance.[3-5] In 60% of the cases, they precede the clinical onset of neoplasm. The neoplasms of the lung, prostate, and gastrointestinal system are frequently associated in men, while neoplasms of breast and gynecological system are more prevalent in women.[6]

The Bohan and Peter criteria are most widely used to make the diagnosis of dermatomyositis.[7] The criteria takes into consideration the physical findings of symmetrical proximal muscle weakness, elevated skeletal muscle enzyme levels, myopathic changes on electromyography, and skin lesion characteristic of dermatomyositis. Meeting all four of the above criteria indicates a definitive diagnosis, three out of four a probable diagnosis, and two out of three a possible diagnosis of disease.[7] Skin and muscle biopsy is also helpful in making the diagnosis, with hallmark features of perifascicular atrophic regeneration, degenerating myofibers, and the presence of perivascular inflammation in the muscle.[8]

CONCLUSION

Dermatomyositis associated with hyponatremia due to SIADH is a rare presentation.

Dermatomyositis should be considered in any elderly patient who comes with rash and proximal myositis.

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