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Case Study

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A CASE REPORT ON ACUTE RHEUMATOLOGICAL PRESENTATION OF DERMATOMYOSITIS

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ABSTRACT

Dermatomyositis is an uncommon illness that results in inflamed muscles. It manifests as skin rash, symmetric proximal muscle weakness, and extramural symptoms such as interstitial lung disease and dysphagia. Here we present a case of 51-year-old female patient who was diagnosed with dermatomyositis. She has no known co-morbidities. She presented with symptoms of acute onset joint pain in the right wrist, associated with swelling, progressed to involve bilateral wrist, elbows, shoulder and knees. She also had myalgia, predominantly in the thigh muscle, bilateral eyelid swelling with watering of eyes, Skin rashes with burning sensation in the face, neck and upper back. We report a case of dermatomyositis.

KEYWORDS: Dermatomyositis, myalgia, myopathies.

INTRODUCTION

Dermatomyositis is a rare acquired immune-mediated muscle disorder characterised by skin rash and muscular weakening. It is an inflammatory myopathy. While muscle weakness is a common manifestation of all idiopathic inflammatory myopathies, there are differences amongst them in terms of the muscle groups affected and histological findings.

Several genetic, immunologic, and environmental variables are linked to dermatomyositis, despite the condition's unclear etiology. A humoral-mediated assault on the endothelium of arterioles and muscle capillaries causes dermatomyositis.[1]

The primary symptoms are muscle weakness and skin abnormalities. The disease may have an acute or sneaky start and progress through a waxing and waning phase. The most typical presenting sign of dermatomyositis is muscle weakness. Usually, the weakness begins subacutely and manifests as symmetric proximal muscle weakness that progresses progressively. Patients may experience trouble performing tasks including pulling themselves up from a seated posture, lifting objects, brushing their hair, and raising their head off a pillow. In dermatomyositis, distal muscle weakening, discomfort, and stiffness are rare. Dysphagia or dysphonia may be present in severe cases: Gottron papule, Heliotrope rash.

Otherskinfindingsinclude: gottronsign, facialerythema, shawsign, vsign, poikiloderma, holstersin, peringuinalinvolvement, mechanichand, scalp involvement, calcinosis cutis.[1]

Skin and muscle biopsies as well as blood testing are typically used to diagnose dermatomyositis. Elevated levels of particular muscle enzymes, which indicate damage. Additionally, a muscle biopsy and skin biopsy may be required. The following imaging tests are most frequently used to detect dermatomyositis: MRI stands for magnetic resonance imaging, radiography of the chest. Electromyography (EMG): This test detects electrical activity in response to activation of the muscles or nerves.[2]

Corticosteroids: These hormones will lessen the swelling in your muscles.

Physical therapy: Both physical therapy and exercise in general can assist in repairing muscle injury.

Immunosuppressive medications: Immunosuppressive medications prevent the immune system from causing harm to healthy tissues and cells. They have the ability to lessen any muscular damage that your body's defences may be producing.[2]

Intravenous immunoglobulin (IVIg): Immunosuppressants can be used in conjunction with IVIG therapies, or they can be used alone. Speech therapy: Speech therapy can help you strengthen the muscles in your throat that support you're swallowing if you have weakness in the muscles in or around your throat.[2]

CASE REPORT

A 51-year-old female patient, who has no known co-morbidities presented with complaints of Polyarthralgia, myalgia since 5 days, Eyelid swelling and watering since 3 days, Skin rashes with burning sensation in face and upper back since 3 days. Acute onset joint pain in the right wrist, associated with swelling, progressed to involve bilateral wrist, elbows, shoulder and knees, no morning stiffness, axial joint involvement, no history of improvement in pain after movement - persistent, she also had complaints of myalgia, predominantly in the thigh muscles, bilateral eyelid swelling with watering of eyes, Skin rashes with burning sensation in the face, neck and upper back. She was not on any regular medications.no history of similar illness in her family members.

On general examination she was Conscious, oriented, No pallor, icterus, cyanosis, clubbing, lymphadenopathy, edema. On head to foot examination, eyelid swelling, angular stomatitis, heliotrope rash, flagellate lesions with edema in the neck and upper back were seen.

On systemic examination musculoskeletal system presented with Bilateral thigh muscle tenderness+ and Proximal muscle weakness +. There was no local rise of temperature, redness, swelling or tenderness in the joints, deformities noted, Knee and hip movements painful due to myalgia in the thigh muscles [extensors> flexors], SLR negative 90 deg, Gait normal. Total count, CRP and ESR was found to be elevated. Rheumatoid Factor was found to be <8.69, Anti-Cyclic Citrullinated Peptide was found to be **10.1** U/mL Negative: < 18.0 Anti Streptolysin O Ab (ASO) was found to be <51.6, Blood, urine culture and sensitivity showed no growth, HBsAg, HCV was found to be non-reactive, Ferritin was found to be 248.3, ANA IFA was negative, Lactate Dehydrogenase (LDH) was **418.4**, Interferon Gamma Release Assay (IGRA) was found to be negative, Os-Chikungunya Igm Ab, Serum was negative, Weil Felix Test: Proteus Antigen OX 19 were Non-Reactive (<40) Proteus Antigen OX 2 was Reactive (160), Proteus Antigen OX K was Reactive (40).Nailfold capillaries showed few looped capillaries .MRI thigh showed patchy areas of hyper intensity noted in muscles of pelvis, gluteal regions and thighs on both sides with nearly symmetrical involvement likely represent inflammatory myositis. Mild atrophy of muscles of both thighs predominantly involving the posterior and medial compartments. She was treated with inj ceftriaxone, inj Pantop, inj Methylprednisolone, C. Doxycycline.

DISCUSSION

Dermatomyositis characterised by Skin rash and muscular weakening are the hallmarks of this rare acquired immune-mediated muscle disorder. One of the idiopathic inflammatory myopathies (IIM) is how it is categorized. Clinically, patients with hypomyopathic dermatomyositis do not exhibit muscular weakness. Several genetic, immunologic, and environmental variables are linked to dermatomyositis, despite the condition's unclear etiology.[1]

The primary symptoms are muscle weakness and skin abnormalities. The disease may have an acute or sneaky start and progress through a waxing and waning phase. The most typical presenting sign of dermatomyositis is muscle weakness. Usually, the weakness begins subacutely and manifests as symmetric proximal muscle weakness that progresses progressively. Patients may experience trouble performing tasks including pulling themselves up from a seated posture, lifting objects, brushing their hair, and raising their head off a pillow. In dermatomyositis, distal muscle weakening, discomfort, and stiffness are rare. Dysphagia or dysphonia may be present in severe cases: Gottron papule, Heliotrope rash. Others findings include: gottronsign, facialerythema, shawsign, vsign, poikiloderma, holstersign, peringuinalinvolvement, mechanichand, scalp involvement, calcinosis cutis.[1]

Skin and muscle biopsies as well as blood testing are typically used to diagnose dermatomyositis. Additionally, a skin biopsy of any rashes is required. To establish that there is inflammation inside your muscles, your doctor may potentially do a biopsy. One or more of the imaging tests may be necessary. These will be used by your healthcare professional to assess your lungs, muscles, nerves, and other organs. These tests can assist them in determining whether dermatomyositis or another problem is the cause of your symptoms. The following imaging tests are most frequently used to detect dermatomyositis: MRI stands for magnetic resonance imaging, radiography of the chest, electromyography (EMG): This test detects electrical activity in response to activation of the muscles or nerves[2]

Corticosteroids: These hormones will lessen the swelling in your muscles.

Physical therapy: Both physical therapy and exercise in general can assist in repairing muscle injury. Your muscles can withstand any injury from dermatomyositis better if they are stronger.

Immunosuppressive medications: Immunosuppressive medications prevent the immune system from causing harm to healthy tissues and cells. They have the ability to lessen any muscular damage that your body's defences may be producing.

Intravenous immunoglobulin (IVIg): IVIg is an extra dose of immunoglobulin, which is a component of your blood plasma that occurs naturally. Immunosuppressants can be used in conjunction with IVIG therapies, or they can be used alone.

Speech therapy: Speech therapy can help you strengthen the muscles in your throat that support you're swallowing if you have weakness in the muscles in or around your throat.

This case scenario reflects the condition of dermatomyositis which is confirmed from her presenting complaints, her general, systemic examination, investigations and MRI studies.[2]

CONCULSION

Hence, this patient has presented with classic symptoms of dermatomyositis that most commonly present with progressive, symmetric, proximal muscle weakness and a group of characteristic cutaneous findings.

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Conflict of Interest

The authors declared that there is no conflict of interest.

Abbreviations

MRI-Magnetic resonance imaging
EMG-Electromyography
IVIg- Intravenous immunoglobulin
CRP- C-Reactive protein
ESR-Erythrocyte sedimentation ratio
IIM- idiopathic inflammatory myopathies

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