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Challenges in Diagnosing Polymyositis, A Type of Proximal Myopathy of Muscles

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Introduction

Polymyositis is an idiopathic inflammatory myopathy. Idiopathic inflammatory myopathies involve four major subtypes that include polymyositis, dermatomyositis, inclusion body myositis, and necrotizing myopathy. We report such a case that presented with slow progressive chronic proximal myopathy developing in an individual over a period of months.

Case Description

A 64-year-old Chinese gentleman with a history of diabetes, hypertension, and ischemic heart disease recently came to the emergency department experiencing a month long, gradual onset of bilateral proximal muscle weakness in both his upper and lower limbs. The weakness began in his buttocks, thigh and legs, then progressed to his shoulders and upper limbs. He also reported difficulty swallowing (dysphagia). He denied any recent fever, prolonged strenuous exercise, or the use of traditional medications. Additionally, he had no fever, no issues with urinary or bowel incontinence, and no shortness of breath. Neurological examination revealed significant weakness, with power rated 2/5 in the bilateral extensor and flexor muscles of the shoulder and hip. However, strength in his knees, ankles, elbows, and wrists was normal (5/5). His muscle tone, reflexes, sensation, and cranial nerves were all noted to be normal. Initial investigations showed a normal renal profile, but a significantly elevated creatinine kinase level of 12,561 units/L. His full blood count and C-reactive protein were within normal limits. Furthermore, all tumor markers, C3, C4, and antinuclear antibodies (ANA) were also normal. He was subsequently treated as proximal muscle weakness to rule out myositis in emergency department.

The patient was adequately hydrated with an intravenous drip of 1.5 liters over 24 hours, maintaining a positive fluid balance. He was subsequently evaluated by the neuromedical team and admitted to the ward for further investigation, including electromyography (EMG) and serum anti-myositis antibodies testing. . He has been started on oral prednisone 1 mg/kg daily, with intravenous immunoglobulins (IVIG).

Discussion

Polymyositis is an autoimmune disorder, developed due to abnormal activation of cytotoxic T lymphocytes (CD8 cells) and macrophages against muscular antigens and endomysium of skeletal muscles. It's characterized by gradually worsening weakness of proximal muscles. Blood tests will typically show elevated levels of muscle enzymes, indicating muscle damage. Further diagnosis involves electromyography (EMG), which measures muscle electrical activity, and a muscle biopsy. The biopsy will reveal specific signs of inflammation and muscle fiber damage.

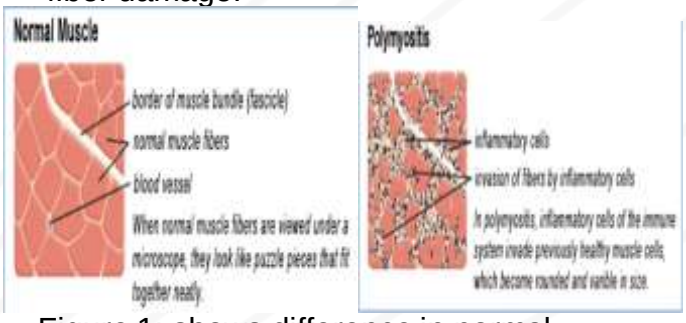

Figure 1: shows difference in normal muscle cell and in polymyositis

Conclusion

Polymyositis, is a chronic disease, associated with increased morbidity and mortality due to its complications like increased risk of myocardial infarction, aspiration pneumonia, and risk of thromboembolism. The mainstays of therapy are corticosteroids and other immunosuppressive drugs.

Reference

1)https://pmc.ncbi.nlm.nih.gov/articles/PMC3482800
2)https://understandingmyositis.org/myositis/polymyositis/
3)https://understandingmyositis.org/myositis/polymyositis/
4)https://www.ncbi.nlm.nih.gov/books/NBK563129/#article-27417.r4