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Treatment approach on Polymyositis - A Case Report

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ABSTRACT

Polymyositis is a type of muscle disease called an inflammatory myopathy, it causes inflammation of muscles and related tissues. It can cause muscle weakness and pain, often on both sides of the body. We report a female patient with clinical presentation such as upper limb weakness, muscle pain and difficulty in doing daily activities. Diagnostic tests such as electromyography, MRI, muscle biopsy and CPK levels are commonly elevated in acute phase of polymyositis. Here our patient was diagnosed by EMG, NCS and elevated levels of muscle enzymes. Patient symptoms got improved after the administration of corticosteroids. There is no complete cure for polymyositis, treatment can improve muscle strength and function.

INTRODUCTION

Polymyositis is a rare idiopathic inflammatory myopathy that causes symmetrical proximal muscle weakness, elevated skeletal muscle enzyme level (CPK, LDH, AST, ALT) and muscle biopsy finding[1]. Polymyositis can be classified into adult polymyositis, dermatomyositis, myositis with malignancy, childhood myositis, myositis with other connective tissue[2]. Prevalence rates of polymyositis estimated as approximately 1 per 100,000 in the general population[1]. There is a female to male dominance of about 2:1[1].

The muscle cell damage that occur is thought to result from an attack on muscle tissue by WBC called T lymphocyte, which normally are produced by immune system to fight against infection. The factor that precipitates this autoimmune response was unknown. But there are some evidences which shows that viral infection can trigger to cause polymyositis.

The main symptoms are muscle weakness on both upper and lower limb, difficulty in raising arm, lifting object and combing hairs, climbing and descending stairs, sitting and rising from sitting postures, swallowing, speaking, fatigue, shortness of breath. Treatment of polymyositis is empirical because of the rarity of the disease. As per the standard treatment guideline corticosteroids are the first line agents for treating polymyositis.

CASE REPORT

A female patient was admitted in neurology department with complaints such as difficulty in getting up from sitting position for 2 months, decreased sleep for 5 months, bilateral upper limb weakness for 2 months, unable to comb hair, difficulty in putting button of blouse, unable to hold things in hands for 2 months and

muscle pain for 6 months. Patient had a past medical history of dyslipidaemia and hypertension; the past medications include T. Telmisartan 40 mg once daily, T. Atorvastatin 10 mg bed time.

Laboratory investigation shows the patient CPK level was significantly elevated to 4247 IU/L at the time of admission, on further days of hospitalization it was depleted to 1407 IU/L; ALT was 151 U/L; AST was 293 U/L; ESR was 20 mm/hr. EMG report shows reduced recruitment and evidence of active bilateral denervation and NCS report was consistent with symmetric motor axonopathic process. USG abdomen and pelvis indicate Grade I fatty liver. Based on symptoms and laboratory investigation the patient was diagnosed as Polymyositis.

Patient was admitted for 8 days and T. Alprazolam 0.25 mg given as STAT and treated with Inj. Methyl Prednisolone 500 mg once daily, T. Telmisartan 40 mg once daily, T. Atorvastatin 10 mg once daily, C. Evion LC twice daily, Inj. Pantoprazole 40 mg twice daily, Syp. Sucralfate 10 ml thrice daily, T. Escitalopram oxalate and clonazepam 5 mg+ 0.5 mg HS, T. Cholecalciferol 60 k once weekly.

After 8 days of treatment, the patient complaints such as upper limb weakness, muscle pain, difficulty in doing daily activities were improved. Hence the patient was discharged with the advice of T. Telmisartan 40 mg once daily, T. Atorvastatin 10 mg once daily, C. Evion LC twice daily, T. Pantoprazole 40 mg twice daily, T. Cholecalciferol 60k once weekly, T. Escitalopram 5 mg once daily, T. Nitrazepam 5 mg once daily, T. Methyl prednisolone 8 mg thrice daily for 2 days then tapered as twice daily for 2 days and once daily for next 2 days.

DISCUSSION

Polymyositis is an immune-mediated syndrome that is most commonly associated with other systemic autoimmune disease. It may be due to diverse causes that occur alone or in association with viral infection, malignancies and drugs. It can affect seriously in performing daily activities. This condition can cause dysphagia which in turn may cause weight loss and malnutrition, aspiration pneumonia, respiratory failure and calcinosis. Our patient presented with symptoms such as difficulty in getting up from sitting position, decreased sleep and bilateral upper limb weakness, unable to comb hair, difficulty in putting button of blouse, unable to hold things in hands, joint pain and body ache.

Normally patients with polymyositis have an elevated CPK level. Our patient had a CPK value of 4247 IU/L. NCS and EMG characteristically demonstrates the polymyositis condition.

Treatment options include corticosteroids, immuno suppressive agents (azathioprine, cyclophosphamide, chlorambucil, cyclosporine, tacrolimus), IV immunoglobulins, biological therapy (rituximab, abatacept, anakinra). Non pharmacological therapy includes physical therapy, speech therapy, dietary assessment (high protein diet). Our patient was administered with corticosteroids, shows an improvement in muscle weakness. This case report illustrates the importance of corticosteroids for the polymyositis treatment.

CONCLUSION

Polymyositis is an uncommon inflammatory myopathy that causes muscle weakness affecting both sides of the body. The exact cause of polymyositis is unknown. Muscle enzymes such as CPK, LDH, AST and ALT are commonly elevated in this condition**.** This condition is diagnosed by electromyography, ESR, antibody findings, muscle biopsy, MRI.

Corticosteroids are the first line agents for treating polymyositis as per the standard guidelines. Those who are not responding to corticosteroid upto 4 weeks, immunosuppressive agents can be given. Our patient was administered with corticosteroids during hospitalization and continues after discharge.

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Not applicable.

CONFLICT OF INTEREST

The author has no conflict of interest.

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