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## RESEARCH ARTICLE

### A CASE STUDY ON INFLAMMATORY MYOSITIS

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#### ABSTRACT

A 30 year old female patient presented with complaints of weakness of all four limbs, swelling and pain on movement, difficulty in walking since last one month. She was investigated and diagnosed as a case of inflammatory myositis, she was treated with steroids, she showed good response to steroids and was discharged.

## INTRODUCTION

Inflammatory myopathies are a group of diseases, with no known cause, that involve chronic muscle inflammation accompanied by muscle weakness. The four main types of chronic, or long-term, inflammatory myopathies are polymyositis, dermatomyositis, inclusion body myositis, and necrotizing autoimmune myopathy. Although the cause of many inflammatory myopathies is unknown, the majority are considered to be autoimmune disorders, in which the body's immune response system that normally defends against infection and disease attacks its own muscle fibers, blood vessels, connective tissue, organs, or joints. These rare disorders may affect both adults and children, although dermatomyositis is more common in children. Polymyositis and dermatomyositis are more common in women than in men. Inclusion body myositis is most common after age 50. General symptoms of chronic inflammatory myopathy include slow but progressive muscle weakness that starts in the proximal muscles—those muscles closest to the trunk of the body. Other symptoms include fatigue after walking or standing, tripping or falling, and difficulty swallowing or breathing. Some individuals may have slight muscle pain or muscles that are tender to the touch. Polymyositis affects skeletal muscles (involved with making movement) on both sides of the body. Dermatomyositis is characterized by a skin rash that precedes or accompanies progressive muscle weakness.

Inflammatory myopathy is characterized by progressive muscle weakness and wasting. Juvenile myositis has some similarities to adult dermatomyositis and polymyositis. Symptoms of necrotizing autoimmune myopathy include weakness in both the upper and lower body, difficulty in rising from low chairs, climbing stairs, or lifting objects, fatigue, weight loss, and muscle pain.

## Case Report

### History

A 30 year old female patient presented with complaints of weakness of all four limbs, swelling and pain on movement, difficulty in walking since last one month. she gave a preceding history of chickengunya infection 15 days back. She had proximal muscle weakness which was progressive in nature involving upper limb more than lower. There was no diurnal variation. The most striking feature was that she was not able to raise arm above shoulder and difficulty in standing from sitting position and change in quality of voice and pain in all 4 limbs. Fine motor movement were normal i.e she was able to do buttoning and unbuttoning, there was no difficulty in wearing chhappals.

**Examination:** On examination she was alert, fully oriented.

Painless muscle weakness prevented her from standing or sitting. she had normal strength in both her hands and her feet, but active lifting of her head, legs, and arms was barely possible while she was supine, and her speech was hypophonic. She had non pitting edema in her lower legs.

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## Types of myositis

Characteristic	Polymyositis	Dermatomyositis	Inclusion body Myositis
Age at onset	>18 years	Adulthood	Childhood
Familial association	No	Yes	In some cases
Extramuscular manifestations	Yes	Yes	Yes
Associated condition connective tissue diseases	Yes	Scleroderma and mixed connective tissue disease (overlap syndromes)	Yes in upto 20 % cases
Malignancy	No	Yes in upto 15% of cases	No
Viruses	Yes	Unproven	Yes
Drugs	Yes	Yes, rarely	No
Parasites and bacteria	Yes	No	No

## Criteria for diagnosis of inflammatory myositis

CRITERION	DEFINATIVE	PROBABLE
Myopathic muscle weakness	Yes	Yes
Electromyographic findings	Myopathic	Myopathic
Muscle biopsy findings	Primary inflammation with CD8/MCH-1 complex with no vacuoles	Ubiquitous mch-1 expression with minimal inflammation and vacuoles
Muscle enzymes	Elevated upto 50 fold	Elevated upto 50 fold
Rash or calcinosis	absent	Absent

With tenderness in all 4 limbs. Her reflexes, eye movements, and cranial nerve function were normal with plantar flexor response. No involvement of extraocular muscle and facial muscles. Meningeal signs were absent. No lesions on skin were noted.

## Lab data

Her laboratory values were as follows: hemoglobin 8.99 g/L, leukocyte count  $9.1 \times 10^9/L$ , erythrocyte sedimentation rate 14 mm/hour, creatine kinase 1508 U/L, C-reactive protein was positive, creatinine 0.4 mg/dl, urea 26mg/dl, sodium 142 mmol/L, and potassium 4.3 mmol/L. thyroid gland function were normal, and her human immunodeficiency virus test was negative. Additional serological tests for hepatitis B, hepatitis C, anti-nuclear antibodies, all yielded negative results. EMG suggestive of myopathic features. Muscle biopsy shows dense chronic endomysial inflammatory infiltrate.

## Management

Patient was initially treated with injectable antibiotics and diuretics which was later omitted after blood reports and patient was put on

- Tablet OMNACORTIL (METHYLPREDNISOLONE) 60 mg once a day for 5 days and was tapered accordingly for upto 28 days
- Tablet AZORAN (AZATHIOPRINE) 50 mg once a day for 5 days which was later increased to twice a day

## DISCUSSION

The inflammatory myopathies are a heterogeneous group of diseases with diverse clinicopathological features and etiologies. The latest classification of these disorders is shown in Table 1. Focal or at times more widespread forms of myositis can be caused by viral, bacterial, fungal, protozoal or parasitic microorganisms and the clinical and pathological features and treatment of these infective forms of myositis are well-documented in other reviews.

## Conclusion

We suspected inflammatory myositis with clinical symptoms and confirmed it with nerve conduction studies. Within 2 weeks of treatment, she was able to move freely without any pain was able to all her routine activity with any help of others.

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