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CASE REPORTS

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# A Case Study on Polymyositis

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## ABSTRACT

Polymyositis, an autoimmune and chronic inflammatory myopathy, is characterized by symmetrical proximal muscle. The estimated prevalence of polymyositis and dermatomyositis is 5 to 22 per 100,000 persons, and the incidence is approximately 1.2 to 19million persons at risk per year. The commonly responsible viruses for polymyositis are the retroviruses (HIV) and HTLV1, and hepatitis C virus. It develops due to abnormal activation of cytotoxic T lymphocytes (CD8 cells) and macrophages against muscular antigens that result in rhabdomyolysis and ultimately presents as a proximal myopathy. The case discussed about the progression of the disease.

**Key word**: Polymyositis, CD 8 cell, inflammatory disease, non-communicable diseases, rhabdomyolysis.

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## INTRODUCTION:

Polymyositis, an autoimmune and chronic inflammatory myopathy, is characterized by symmetrical proximal muscle weakness due to the involvement of endomysia layers of skeletal muscles versus dermatomyositis, which involves the perimysium layers of muscles along with dermatologicalpresentations.[1] Being an autoimmune disorder, polymyositis, rheumatological disease, requires long-term treatment with steroids or immune modulators along with the treatment of the underlying etiological factors. Polymyositis is a chronic inflammatory disease, so multiple small foci of inflammatory and necrotic changes and regenerative nodules can be seen on biopsy.

Histopathological findings of polymyositis show endomysial mononuclear infiltrate consisting of mostly CD8 T cells and macrophages along with necrotic myofibrils in the early stage. Polymyositis can be differentiated from inclusion body myositis due to the presence of intracytoplasmic inclusion bodies in IBM, and from dermatomyositis due to perimysial infiltrates of CD4 cells as well as B lymphocytes.

**Case Presentation:**

A 15-year-old male patient got admitted with presenting complaints of difficulty in getting up from squatting position for 80 days, difficulty in climbing stairs and lifting arms for 30 days. On physical examination patient was conscious and oriented and vitals were found to be PR:90/min, BP:100/80mmHg; systemic examination were found to be CVS S1S2 (+), RS NVBS (+), P/A-soft. Laboratory investigation on admission revealed that the patient haemoglobin value 13.6gm/dl, total count 8300cells/cumm, RBS 100mg/dl, Blood urea 28mg/dl, serum creatinine 0.8mg/dl, serum TSH 3.83µIU/mL, serum Anti-TPO < 1. The patient was treated with following drugs on day IV methylprednisolone 500mg in 500mlNS over 4 hours for 3 days. And the patient was discharged with Tablet calcium 300mg BD, C. omeprazole 20mg BD, T.BCT OD.

## DISCUSSION

The estimated prevalence of polymyositis and dermatomyositis is 5 to 22 per 100,000 persons, and the incidence is approximately 1.2 to 19million persons at risk per year. Prednisone and methylprednisolone are the most common corticosteroids used for polymyositis with a starting dose of 1mg/kg of prednisone a day. The second-line treatment option includes the use of immune-modulators (methotrexate, azathioprine, and cyclosporine).

## CONCLUSION

Polymyositis, a relatively uncommon autoimmune disorder, develops due to abnormal activation of cytotoxic T lymphocytes (CD8 cells) and macrophages against muscular antigens that result in rhabdomyolysis and ultimately presents as a proximal myopathy. The commonly responsible viruses for polymyositis are the retroviruses (HIV) and HTLV1, and hepatitis C virus that possibly cause this inflammatory muscle degeneration by causing endomysial damage leading to oedematous swelling and nodular mass formation in the myocytes.

## REFERENCES

1. Dalakas MC, Pezeshkpour GH, Gravell M, Sever JL. Polymyositis associated with AIDS.

retrovirus. JAMA. 1986 Nov 07;256(17):2381-3.

2. Gómez Rodríguez N, Ibáñez Ruán J, GonzálezRodríguez M. [Coxsackie virus infection associated with myositis and polyarthritis]. An Med Interna. 2008 Feb;25(2):90-2.

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