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# Psoriasis with polymyositis; a rare combination of two autoimmune diseases

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## Abstract

Psoriasis with polymyositis although both are autoimmune diseases, they have rarely been reported together. Psoriasis is a papulosquamous skin disease with erythematous papules or plaques and silvery scales. Polymyositis is an autoimmune disease with inflammatory myopathy affecting predominantly proximal muscles. We report a case of psoriasis with steroid resistant polymyositis.

## Introduction

Psoriasis with polymyositis although both are autoimmune diseases, they have rarely been reported together. Psoriasis is a papulosquamous skin disease with erythematous papules or plaques and silvery scales. Polymyositis is an autoimmune disease with inflammatory myopathy affecting predominantly proximal muscles (1,2). We report a case of psoriasis with steroid resistant polymyositis.

**Key point**

Weather there is similar autoimmune process in the pathogenesis of polymyositis and psoriasis needs to be searched and identified.

## Case Report

A 35-year-old male presented with one year history of plaques over limbs and scalp and extensor surfaces of limbs, and four months history of difficulty in standing from sitting position. Examination revealed diffuse psoriatic patch's on extensor surfaces of limbs (Figure 1) and grade four power of hip and shoulder muscles. Investigations revealed elevated muscle enzymes LDH=964 IU/mL, CPK=5446 IU/mL. EMG showed myopathic pattern (Table 1). Muscle biopsy showed inflammatory cell infiltration with adjacent areas of degenerated muscle fibres and fatty changes consistent with inflammatory myopathy. Pulmonary function test and X-ray of chest were normal. High-resolution computed tomography of chest was also normal. Nerve conduction velocity was normal and 24-hour urinary protein <50 mg/d was normal too. complete blood count (CBC) showed haemoglobin level of 15 g/dL and platelets count of 187000/µL. Coombs test was negative. The coagulation profile was normal too. Arterial blood gas and electrolytes were normal accordingly.

With these clinical features and laboratory parameters, the patient was fulfilling Peter and Kahan criteria for polymyositis and psoriasis was evident on clinical examination. For patient prednisolone 1 mg/kg was administered. Six weeks later, the patient was reassessed although patient's psoriatic plaques had disappeared but the

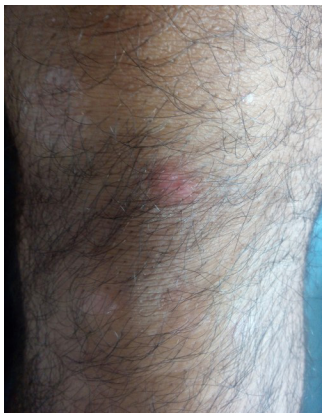

**Figure 1.** Psoriasis over extensor surface of lower limb.

**Table 1.** EMG report of patient with features of polymyositis

| Muscle | Spontaneous activity | | | Motor unit action potential | | | Max. voltage activity |
|---|---|---|---|---|---|---|---|
| | Fibrillations | Positive sharp waves | Fasciculations | Duration | Amplitude | Polyphasia | Recruitment |
| Left deltoid | - | - | - | 5-10 | 0.5-1.0 | - | Full |
| Left first dorsal Interosseous | - | - | - | 5-10 | 0.5-1.5 | - | Full |
| Left vastus lateralis | - | - | - | 5-10 | 0.5-1.0 | - | Early and full |
| Left tibialis anterior | - | - | - | 5-10 | 0.5-1.0 | - | Early and full |

weakness of muscles was persistent and muscle enzymes were higher than the baseline level. Azathioprine was added then, myopathy improved clinically, accordingly laboratory assessments showed improvement too.

## Discussion

Polymyositis is an idiopathic inflammatory myopathy which is immune mediated disorder that may be existent in an isolated form or in combination with some other autoimmune or connective tissue disorders (1). The suggested etiologic mechanism is T-cell mediated cytotoxic process directed toward unknown muscle antigens. This mechanism is supported by the existence of CD8+ T-cells, accompanied by macrophages, which initially surround normal non-necrotic muscle fibers and finally attack and damage them (2,3).

Psoriasis on the other hand is a relapsing skin disease. The diagnosis is of which is made on clinical grounds (4). Arthritis as an extra-cutaneous manifestation of psoriasis, is a known disorder (5). However, only a single case report of psoriasis with polymyositis has been reported (6). However it was not a steroid resistant polymyositis as was the case in our patient.

## Conclusion

Weather there is similar autoimmune process in the pathogenesis of polymyositis and psoriasis needs to be searched and identified.

### Authors' contribution

All authors contributed equally to the paper.

### Conflicts of interest

The authors declare no conflict of interest.

### Ethical considerations

Ethical issues (including plagiarism, data fabrication, double Publication) have been completely observed by the authors.

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