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Original Article

Treatment of Schamberg's disease with pentoxifylline - therapeutic trial

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Abstract Thirty patients with Schamberg's disease were started on pentoxifylline (400 mg three times daily) for a period of 9 weeks. Improvement was assessed at 3 weekly intervals by two observers independently and graded as mild (<25%), moderate (25-50%) and marked (>50%). Marked improvement was observed in 15/30 (50%) patients. We conclude that pentoxifylline should be considered as first line therapy in all patients with Schamberg's disease.

Keywords
Schamberg's disease, pentoxifylline

Introduction

Schamberg's disease (progressive pigmented purpuric dermatoses) is a capillaritis of unknown etiology characterized by orange to fawn-colored macules and plaques usually localized to the lower limbs.[1] Characteristic 'cayenne pepper' spots due to hemosiderin deposition in the skin are seen at the periphery of the lesions.[1] Histopathology consists of a superficial lymphocytic perivascular inflammation with increased capillaries and siderophages in the upper dermis.[2] The disease follows a chronic course with spontaneous clearance in a few cases. Treatment modalities which have been used include topical and systemic corticosteroids, vitamin C and topical and systemic anti-inflammatory agents. Pentoxifylline, a methylxanthine derivatice, has been used successfully in treatment of various types of vasculitides, specially leucocytoclastic vasculitis. A report of its successful use in Schamberg's disease' prompted us to conduct a larger trial. Pentoxifylline is well absorbed orally but undergoes extensive first-pass metabolism in the liver before being excreted in the urine. Peak plasma levels occur within 2 hours, and the half-life is 4 to 6 hours.

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Patients and methods

Thirty patients presenting with characteristic lesions of Schamberg's disease confirmed on histopathology were included in the trial. Pentoxifylline was started in a dose of 400 mg three times daily. No other topical or systemic treatment was given during the study period. Response to treatment was assessed independently by two observers at 3 week intervals and graded as percentage of clearance of lesions. Improvement was graded as mild (<25%), moderate (25-50%) and marked (>50%).

Results

The improvement as assessed by two different observers at 3 weekly intervals is

Table 1 Assessment of improvement (n=30).

S. No.	*Age/sex*	*Improvement*			*Associated feature*
		3 weeks	6 weeks	9 weeks	
1	37/M	+	++	+++	
2.	42/M	-	+	+++	Diabetic
3.	29/F	-	+	+	
4.	32/M	+	+	+++	
5.	32/M	+	++	+++	
6.	30/M	+	++	+++	
7.	60/M	+	+	+	
8.	36/M	-	-	-	
9.	20/M	-	++	+++	
10.	55/M	+	++	+++	Diabetic
11.	22/M	+	++	+++	
12	28/M	+	++	+++	
13	16/M	-	+	+++	
14.	28/M	-	+	+++	
15.	33/M	-	++	+++	
16.	41/M	-	+	+++	
17.	43/M	-	+	+++	
18.	32/M	-	-	-	
19.	43/M	+	++	+++	
20.	51/M	-	+	+++	Hypertension
21.	41/M	-	+	++	
22.	43/M	+	+	+++	
23.	32/M	+	+	++	
24.	38/M	+	+	+	
25.	24/M	+	+	+	
26.	25/M	+	+	++	
27.	27/M	+	+	++	
28.	42/M	+	+	++	
29.	31/M	-	-	-	
30.	30/M	-	-	-	Hypertension

+= mild improvement (up to 25%), ++=moderate improvement (up to 25-50%), +++=marked improvement (upto 25%)

as shown in **Table 1**. Improvement was seen in 26 (86.6%) patients. It was rated as marked in 17 (56.6%) patients, moderate in 5 (16.6%) and mild in 4 (13.4%) patients.

Discussion

Successful treatment in Schamberg's disease presents a veritable challenge to the treating physician. Spontaneous clearance, though well documented, occurs uncommonly. Commonly recommended treatment modalities include physical measures aimed at reducing venous pressure (graduated compression stocking), topical and systemic steroids, ascorbic acid, topical and systemic anti-inflammatory agents and griseofulvin. Pentoxifylline, a methylxanthine-derivative, has multiple effects at cellular level including potent rheological properties. This results in increased erythrocyte deformability, immunomodulator action by modifying cytokine profile and antifiroblastic action.[3]

The improvement as assessed by two different observers at 3 weekly intervals is as shown in **Table 1.** Recently, Kano *et al*.[2]

have demonstrated a decrease in expression of ICAM-I on endothelial cells of blood vessels of lesional skin following successful treatment with pentoxifylline. This results in decreased exudation of inflammatory cells from capillaries into the surrounding perivascular tissue. Moreover, pentoxifylline inhibits synthesis and release of TNF-α.[4,5] This results in reduced TNF-α-mediated extravasation from the capillaries. Our preliminary study shows marked improvement in 17/30 (56.6%) patients after 9 weeks of treatment. Pentoxifylline is an economical and easily available drug which is devoid of serious side effects. So we conclude that pentoxifylline should be considered as first line therapy in Schamberg's disease.

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