

# Resolution of Chilblain Lesions with Methyl Sulfonyl Methane: Case Report

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## Abstract

**Background:** Chilblains (pernio) is a severely disabling condition that doesn't have any effective treatment. This is a relatively very common condition seen during winters. Several researches have been conducted to establish an effective treatment for this condition but none have been successful in finding a complete resolution of the same. This paper talks about the effectiveness of methylsulfonylmethane (MSM) in the management of chilblains. The use of MSM has been researched before commonly for its antioxidant properties but no research has been done to establish its effectiveness in the management of chilblains. The complete resolution of chilblains in this case could potentially help other patients suffering from the same.

**Case Presentation:** The patient is a 37-year-old Asian lady with extensive travel history to cold places. She does not have any history of other comorbid conditions and no prior surgeries. She presented with severe itching in her fingers and toes, especially during the night when exposed to a cold environment. This progressed to the development of plaques. She was diagnosed with chilblains and was put on nifedipine, topical betamethasone, hydrochloroquine and topical nitroglycerin alternatively. Unfortunately, none of these therapies helped her. The only remedy that eventually helped her was MSM, with this she was able to develop a complete resolution of symptoms and no relapse was seen as long as she was on this supplement.

**Conclusion:** Chilblains is a disabling condition that doesn't have any effective treatment. MSM is a simple and safe supplement with little to no side effects. Several studies have been conducted to study its role in preventing oxidative stress on a cellular level. Unfortunately, no study has been conducted to study its role in the treatment of chilblains. Its effectiveness in chilblains in this case could apply to several other cases suffering from this condition. This calls for further research on a larger group of patients to prove its efficacy.

**Keywords:** Chilblains, pernio, methylsulfonylmethane

## Introduction:

Chilblains is an idiopathic skin condition that could be severely disabling. It commonly presents as pruritic plaques or patches in acral parts of the body. Clinical presentation could vary from a single itchy plaque to multiple coalesced plaques and deep blisters that can be severely disabling. The condition tends to worsen if left untreated as long as the chilly environment persists. The resolution is spontaneous as the weather gets warmer. Diagnosis of the same doesn't require any additional tests<sup>1</sup> unless the patient presents with additional symptoms pointing towards underlying autoimmune diseases.

**Case presentation:**

The patient is a 32-year-old Asian lady with an extensive travel history. She complained of severe itching followed by redness and plaques in her extremities every time she visited chilly areas. She was diagnosed with chilblains and had not found any effective medical line of treatment despite trying various medications. Nifedipine, topical betamethasone, hydrochloroquine and topical nitroglycerin were a few of the medications she was put on. Prevention was her only solution and this was achieved by limiting her exposure to cold and rewarming her extremities after exposure to cold. This would decrease the intensity of the condition, but symptoms would persist for the duration of her stay in chilly areas.

The underlying cause of the Chilblains is not well recognised. It is commonly attributed to inflammation and poor peripheral circulation. Histology of the biopsy showed perivascular lymphocytic infiltrate with endothelial swelling of the subcutaneous fat and of the upper and lower dermal plexus.<sup>2</sup> There has been no treatment to cure this condition or relieve the patient's symptoms completely despite extensive research. Calcium channel blockers (especially nifedipine<sup>3</sup>), topical betamethasone, pentoxifylline, hydrochloroquine and topical nitroglycerin are few medications studied but research has shown to be effective in only a limited number of patients.

The role of MSM has not been researched for this condition. I have observed the resolution in Chilblains with MSM supplements. A simple 1000mg dosing once a day was shown to alleviate the patient's condition. She showed complete recovery from existing symptoms and lesions of chilblains. MSM has not been shown to cure this disease but it has been effective in resolving the symptoms. No relapse was reported during the duration of continued usage of MSM. However, relapse of the disease was successfully treated by restarting MSM with no resistance seen to the same. She did not show any adverse reaction to MSM while on this medication for two years.

**Discussion/conclusion:**

The effectiveness of MSM in this severely disabling condition with no effective medical line of treatment should be further researched on a larger group of patients. MSM is a safe supplement and has not shown to have any major side effects even with doses as high as 4mg. This also calls for MSM in the management of similar conditions with poor peripheral circulation. I hope this finding will help many suffering from Chilblains.

**Ethics approval and consent to participate:** The patient's consent was taken before starting the supplement and while writing this paper describing the patient's successful recovery.

**Consent for publication:** Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

**Availability of data and material:** The data is readily available.

**Competing interests:** I do not have any competing interest.

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**Authors' contributions:** The author has solely contributed to the study and establishing the association of MSM with the treatment of chilblains

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**References:**

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