

# Indian Journal of Dermatology, Venereology & Leprology

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The Indian Journal of Dermatology, Venereology and Leprology is a bimonthly publication of the Indian Association of Dermatologists, Venereologists and Leprologists and published by Medknow Publications.

The Journal is indexed/listed with Health and Wellness Research Center, Health Reference Center Academic, InfoTrac One File, Expanded Academic ASAP, NIWI, INIST, Uncover, JADE (Journal Article Database), IndMed, Indian Science Abstract's and PubList.

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## Fever due to levamisole

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### ABSTRACT

Fever is rarely caused by levamisole. We report a 26-year-old woman who repeatedly developed fever 4-12 hrs after taking levamisole. The association was confirmed by repeated provocation tests.

**KEY WORDS:** Drug fever, Levamisole

### INTRODUCTION

Levamisole, originally developed as an antihelminthic, is also used as a microfilaricide, immunostimulant or immunomodulator. It is a nicotine-like ganglionic stimulant, producing both muscarinic and nicotinic effects at cholinergic receptors. Its side effects include nausea and vomiting, metallic taste, diarrhea, malaise, insomnia, sensory stimulation, hyperallergic state, dizziness, headache, blurred vision and fatigue. Its prolonged use may cause serious toxicity including agranulocytosis,<sup>1,2</sup> cutaneous necrotizing vasculitis,<sup>3,4</sup> ataxia,<sup>5</sup> disseminated autoimmune disease,<sup>6</sup> thrombocytopenia<sup>7</sup> and psychosis.<sup>8</sup> Hypersensitivity due to levamisole in the form of fever and skin rash has also been reported.<sup>9</sup> We report a case of vitiligo who developed repeated episodes of fever on taking levamisole.

### CASE REPORT

A 26-year-old woman presented with progressive depigmentation of the left upper eyelid and toe of 6 months' duration. She was clinically diagnosed as having vitiligo and was started on levamisole 150 mg on two consecutive days every week orally along with fluocinolone acetonide 0.01% cream topically. She developed a 40°C fever 12 hours after taking levamisole

150 mg. There were no complaints of sore throat or burning micturition. Investigations revealed a hemoglobin level of 9.8 mg% and total leukocyte count of 9500/cmm with neutrophils 52%, lymphocytes 45%, eosinophils 2% and monocytes 1%. The ESR at the end of the first hour was 18 mm. Her random blood sugar level was 89 mg%. The urine examination was normal and urine culture was sterile. The fever disappeared with 4 doses of paracetamol 500 mg. She then gave a history of four episodes of fever every time 4-6 hours after taking levamisole 150 mg 6 years ago.

After 24 days, provocation was done with levamisole 150 mg orally. Eight hours later she developed fever (40°C), which was controlled within one hour by paracetamol 500 mg orally. The fever recurred 10 hours after taking the second dose of levamisole 150 mg, which was again controlled with paracetamol. Levamisole was then stopped. She continued applying fluocinolone acetonide cream on the vitiligo lesions with improvement.

### DISCUSSION

The repeated occurrence of fever 4-12 hours after taking levamisole without any underlying infection, points towards levamisole as the cause of fever. Development

of 40°C fever on both the occasions following provocation with levamisole further confirms this. Secher et al reported a patient with rheumatoid arthritis on levamisole who developed a severe itchy skin rash.<sup>9</sup> She developed 40°C fever and rash when provoked with 150 mg levamisole. However, drug fever as the sole side effect of levamisole is hitherto unreported.

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