

CASE REPORTS

FLARE UP OF NICKEL CONTACT DERMATITIS FOLLOWING ORAL CHALLENGE

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A patient having contact dermatitis due to nickel on the wrist, sides of neck, thighs and legs, confirmed by patch tests with nickel sulphate, showed aggravation of the dermatitis following oral provocation with 25 mg nickel sulphate.

Key words : Nickel dermatitis, Oral provocation.

Nickel is one of the most common causes of contact dermatitis, which produces more instances of allergic dermatitis than all the other metals combined.¹⁻³ Nickel sensitive patients are known to get exacerbation of dermatitis after oral ingestion of nickel.⁴ We have recently seen an engineer with recurrent dermatitis on the arms and legs who showed precipitation of skin lesions after oral administration of 25 mg nickel sulphate in a solution.

Case Report

A 35-year-old engineer was having recurrent itchy skin lesions on the wrist, sides of neck, thighs and legs of two and half years duration. The lesions had started initially on the wrist and the sides of neck. Twice the lesions had become generalised, but subsided following treatment with topical and systemic corticosteroids, except the lesions on the wrist and thighs. There was a definite history of flare up of the lesions after wearing the watch.

Patch tests with 5% nickel sulphate solution showed erythema and vesiculation after 72 hours. Oral provocation with 25 mg nickel sulphate in aqueous solution was tried after 10 days of patch testing. Within half an hour

the patient developed itching in the lesions. Six to eight hours later, he developed erythema and exudation in the lesions with swelling of the hands and feet and extensive erythematous papular lesions in the neck, back and chest.

Comments

Nickel is a common sensitizer. Modern civilisation provides ever-increasing opportunities for the general population and industrial worker to come in contact with nickel. The continuous exposure is reflected in the increasing number of patients who are sensitized to nickel.

Oral ingestion of nickel is known to produce aggravation of hand eczema,⁴ while some authors have observed that a small amount of nickel ingested would not produce any exacerbations.⁵ Nickel is naturally present in some foods, but it may be augmented during cooking by contamination from vessels made of nickel alloy. The highest concentration of nickel is in green leafy vegetables, while little or none is present in meat, milk and eggs.⁴ Small amounts of nickel reported to be present in detergents^{4,6} was not found in the Indian detergents.⁷ Ingestion of nickel is a possible cause of chronicity.⁶ Exacerbation of dermatitis due to nickel in tap water has also been observed.⁴ Our patient showed definite exacerbation of existing lesions and developed disseminated lesions following inges-

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tion of 25 mg of nickel sulphate solution.

References

1. Pasricha JS : Contact dermatitis due to working apparels in Delhi, in : Contact Dermatitis in India, Editors, Pasricha JS and Sethi NC : Lyka Lab Publication, Bombay, 1981; p 39.
2. Girgla HS and Gupta SK : Contact dermatitis caused by metals in Varanasi, in : Contact Dermatitis in India, Editors, Pasricha JS and Sethi NC : Layka Lab Publication, Bombay, 1981; p 40.
3. Singh KK and Singh G : Metals causing contact dermatitis in Varanasi, Ind J Dermatol Venereol Leprol, 1987; 53 : 31-32.
4. Cronin E : Contact Dermatitis, Churchill Livingstone, Edinburgh, 1980; p 279-390.
5. Burrows D, Creswell S and Mcrrett JD : Nickel, hands and hip prosthesis, Brit J Dermatol, 1981; 105 : 437-443.
6. Wilkinson DR and Rycroft RJG : Contact dermatitis, in : Text Book of Dermatology, Fourth ed, Editors, Rook A, Wilkinson DS, Ebling FJG et al : Oxford University Press, Bombay, 1987; p 435-532.
7. Krupashankar DS and Srinivas CR : Absence of nickel in detergents confirmed by dimethyl glyoxime spot test, Ind J Dermatol Venereol Leprol (In press).