Contact Dermatitis Caused by Saran Wrap

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RECENTLY, the use of thin plastic films as covering or occlusive dressings in therapy with ointments and creams, especially hydrocortisone derivatives, has been advocated for treatment of several dermatoses.[1-3] This form of therapy is often very beneficial and is becoming increasingly popular.

Only a few complications have been reported from the use of such films. Among them were discomfort from perspiration under the film, a miliaria-like eruption, and folliculitis.[1-3] Where hydrocortisone derivatives were used, atrophy has also been reported.[4]

It is our purpose to report a rare complication, ie, contact dermatitis, from the use of a film (Saran Wrap) itself.

Report of a Case

A 30-year-old white male consulted us on May 2, 1963, because of psoriasis involving his scalp, legs, and arms. According to his medical history, he had had intermittent attacks of psoriasis for many years. He had in the past been treated with aminopterin and cortisone preparations and had used Saran Wrap with local hydrocortisone and related steroid creams. Because an area of psoriasis on his right leg was quite localized, he was given a steroid cream containing triamcinolone acetonide, neomycin sulfate, gramicidin, and nystatin and was told to cover the area with Saran Wrap for two- to three-hour periods every evening. He applied the same cream without covering to the other scattered areas on his arms and legs and he used a scalp lotion containing resorcinol monoacetate.

Over the next few weeks, the patient showed improvement of all his skin lesions. However, on June 6 he returned with an inflamed, swollen, vesicular and exudative dermatitis on his right leg, rather sharply limited to the area covered by the Saran Wrap. The other skin areas on which the same triamcinolone preparation was used uncovered were not inflamed. He was advised to avoid the Saran Wrap, to use a colloidal aluminum acetate (Burow's) solution soak and apply a hydrocortisone-neomycin spray. The inflammation subsided uneventfully over the next few days.

A patch with a 1-cm square of Saran Wrap was applied to the flexor surface of his left forearm where the skin appeared essentially normal. In 48 hours, the test site showed redness and vesiculation (Figure). The patient had continued to use the same triamcinolone cream without difficulty on other skin areas. One week later the patient applied this same cream to the right leg where the Saran Wrap had been used but no reaction was produced.

Comment

Saran Wrap is a copolymer of vinylidine chloride and vinylchloride. Generally, it is considered to be relatively inert. The manufacturers advised that they did not have a single positive reaction in all the skin testing which they did on Saran Wrap as it is commercially available, nor have they had any skin reactions reported to them over the years the product has been on the market.[5]

There is a report of skin reactions to epoxy resins used as plasticizers and stabilizers in polyvinyl chloride films,[6] but these substances, according to information received from the manufacturer, are not used in the Saran Wrap film.[5] Furthermore, we have not been able to find in the literature any reference to reactions to the pure polyvinylchloride or to the copolymer of it with vinylidine.

In view of the large amount of Saran Wrap in past and present daily use, it is obvious that skin sensitivity to it must indeed be rare. However, because the dermatitis in this patient was limited to the area of its application and because of the positive patch test reaction to the product itself, the possibility of skin reactions to Saran Wrap must be kept in mind when it is used as an occlusive dressing for therapy.

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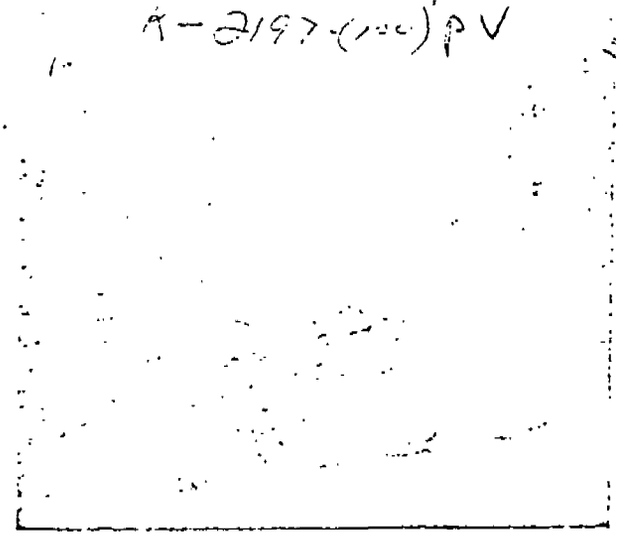

Vesiculation and erythema after Saran Wrap patch test. Subsequent desquamation at this site.

Generic and Trade Names of Drugs

Triamcinolone acetonide—*Aristocort Acetonide, Aristoderm, Kenalog.*

Neomycin sulfate—*Mycifradin Sulfate, Myciguent, Neomycin Sulfate.*

Nystatin—*Mycostatin.*

References

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