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DERMATITIS HERPETIFORMIS ASSOCIATED WITH
A FOCUS INFECTION

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Dermatitis Herpetiformis\textsuperscript{1,2,3,4} is a chronic disease of the skin characterized by lesions of various morphs including erythematous, papular, vesicular, bullous, and pustular lesions. The vesicular form of the disease usually predominates but polymorphism is common. In some cases the primary lesions are not seen and only crusted papules, excoriations, hyperpigmentation, depigmentation, and atrophy are evident. Severe pruritus is an important feature of dermatitis herpetiformis and often the itching is accompanied by a burning sensation. Usually the lesions occur in symmetrical groups and predominate on the elbows, knees, sacral region, trochanteric, and scapular regions.

At various times reports\textsuperscript{5,6,7,8,9,10} referrable to the role of foci of infection in dermatitis herpetiformis have appeared in the literature.

We have observed a patient, in whom the administration of broad spectrum antibiotics and the removal of a source of infection, has appeared to influence the course of the disease.

CASE REPORT

A 49-year-old, white female was first seen on August 29, 1959 because of an acute pruritic eruption of two months' duration, which involved the trunk and extremities. It consisted of grouped vesicles and bullae surmounted on a diffuse, mottled, erythematous, and hyperpigmented background. The rest of the physical examination was non-revealing.

Because of the severity of her eruption, she was admitted to the hospital on September 3, 1959.

Her laboratory studies in the hospital were as follows: white blood count was 8,500 per cu. mm. with 82% segmented forms, 9% lymphocytes; 4% monocytes, and 5% eosinophils. The hemoglobin was 13 gm.%; two hour P.C. blood sugar 90 mg.%; serum urea nitrogen 16 mg.%, and serologic test for syphilis was non-reactive. Microscopic examination of the urine revealed per high powered field, 20-40 epithelial cells, 20 white cells, bacteria and trichomonas. Urine obtained for culture grew on one occasion B. Proteus very sensitive to chloromycetin, moderately sensitive to streptomycin, and resistant to tetracycline. Stools were negative for ova and parasites. The chest x-ray, upper and lower GI series, cholecystogram, and proctoscopy were non-revealing. Skin tests to hemolytic strep, strep, viridans, and staph. toxoid were negative. Dental x-ray revealed severe periodontitis.

A biopsy was taken of a vesicular lesion. The vesicle was subepidermal and contained a moderate exudate of inflammatory cells, many of which were eosinophils.

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There was no significant change in the epidermis which was, however, slightly thinned over the vesicle. There was an exudate of inflammatory cells, mostly mononuclears, about the adnexal structures and vessels of the corium. The histologic findings were compatible with a diagnosis of dermatitis herpetiformis.

Sulfapyridine, prednisone, and nicotinic acid were given in adequate doses and did not influence the course of the disease. Seven days after admission, tetracycline 250 mgm. q.i.d. was started. Two days later the pruritus has disappeared and only an occasional new vesicle was noted. This was in striking contrast to almost complete lack of response to previous therapy. For the next nine days tetracycline was continued in the same dosage and the patient remained relatively free of signs or symptoms of the disease. The tetracycline was then discontinued and after 24 to 48 hours new pruritic vesicles appeared.

On consultation with the oral surgery department, it was decided that a full mouth dental extraction should be done. This was advised because of severe periodontitis. Just prior to the extraction of her teeth, tetracycline was re-instituted for the second time and continued five days. With the administration of tetracycline and the dental extractions her skin cleared. It is interesting to note that during a follow up period of twenty one months, the patient has had no recurrence of her skin lesions.

DISCUSSION

The relationship of dermatitis herpetiformis to a focus of infection has been reported at various times in the past. However, the standard dermatologic text books make little mention of this fact. Sutton, in his discussion on therapy of this eruption mentions that focal infection should be eliminated. Ormsby and Montgomery state dermatitis herpetiformis has followed infections, but say nothing about eliminating infection in their section on therapy. In Pillsbury, Shelly, and Kligman's text book, the only reference to infection is "antibiotic agents have little or no effect upon dermatitis herpetiformis, unless there is active secondary bacterial infection." Andrews does mention in his section on therapy "focal infection, if present, should be treated as some cases have thus been permanently cured."

Irving presented a patient with dermatitis herpetiformis in 1918 to the Minnesota Dermatologic Society. After an infected tonsil was removed, his lesions improved significantly. Later Epstein reported on two patients with localized bullous eruptions on the skin and one with a generalized bullous eruption, which cleared after infected teeth were removed.

Callaway and Sternberg treated a patient who had dermatitis herpetiformis and bronchiectasis. They prepared an autogenous vaccine of pneumococcus type VII, isolated from the patient's upper respiratory tract. Apparently administration of the vaccine over a period of time resulted in involution of the lesions. Intradermal tests with the vaccine caused a bullous reaction at the test site and it was their opinion that bacterial allergy was important etiologically in this patient.

Intradermal injections of various bacterial vaccines were given by Swartz and Lever to twelve patients with dermatitis herpetiformis and in twenty patients with
other skin diseases. In five of the patients with dermatitis herpetiformis, local vesicular reactions occurred with Bact. Coli vaccine. In one of the five patients a vesicular reaction followed staph vaccine at the test site and another strep vaccine. They felt that this response was based on bacterial allergy.

Epstein\textsuperscript{10} was able to produce bullous delayed reactions to skin tests with streptococci antigens in two children with dermatitis herpetiformis. He also mentioned in his paper that Bernhardt and Leone had produced similar type reactions with other vaccines. He felt that bacterial allergy may be important etiologically in a large significant percentage of patients with dermatitis herpetiformis.

At various times during the past seventeen years, a number of investigators have reported on the use of both penicillin and broad spectrum antibiotics in the management of dermatitis herpetiformis.

Thus Carpenter and Hall\textsuperscript{11} gave penicillin to six patients with dermatitis herpetiformis and controlled their eruptions. Their thought was that bacterial allergy might be important in these patients. Both Saffron\textsuperscript{12} and Grund\textsuperscript{13} found aureomycin effective in a small series of patients. Robinson and Robinson\textsuperscript{14} also reported good results with aureomycin in six out of ten patients with dermatitis herpetiformis. In a recent paper Cornbleet\textsuperscript{15} mentioned that antibiotics are helpful in dermatitis herpetiformis. Unfortunately no mention was made in these papers about a possible source of infection.

It would appear from our case and also from the literature, that some patients with dermatitis herpetiformis have a bacterial allergy which may contribute partially or wholly to their disease. Thus it behooves all of us to investigate patients with dermatitis herpetiformis for foci of infection. Even though removing a focus of infection may not cause a permanent remission, it may permit a patient to live for a relatively long period of time without any manifestations of his disease.

**SUMMARY AND CONCLUSIONS**

A patient with dermatitis herpetiformis, who improved while taking broad spectrum antibiotics, and had a prolonged remission when a focus of infection was removed, is reported. It is important when treating a patient with dermatitis herpetiformis to search for a course of infection and if possible remove it. If there is a focus of infection, broad spectrum antibiotics may give the patient spectacular relief prior to the definitive treatment of it.

**REFERENCES**

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