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AN ACNEFORM DERMATERGOSIS

JACK W. JONES, M.D.
AND
HERBERT S. ALDEN, M.D.
ATLANTA, GA.

It is only within comparatively recent times that the dermatologist has interested himself in dermatoses associated with or caused by the daily work. With the advent of a more clearly defined appraisal of the words eczema and dermatitis and the more general use of the patch test, dermatologists have necessarily inquired more and more deeply into the innumerable chemical contacts that occur in the day by day lives of their patients. As well as being conversant with dermatology, the dermatologist must have a working knowledge of the manufacture and content of the many new and old compounds that are handled and applied by large numbers of persons. Hence, more and more dermatologists are becoming industrially minded, and it is dawning on them that the solution of some of their industrial difficulties may aid them in a clearer conception of the dermatoses that are encountered in their every-day practice.

Dermatergoses of the acneform type occurring in persons working with chemicals have been repeatedly reported in Europe and discussed as industrial "chlor-acne."[1] This term "chlor-acne" was first used by Herxheimer[2] in 1899 to describe an eruption composed of comedones and small sebaceous pustules that occurred on the arms and faces of workers manufacturing chlorine gas electrolytically, using carbon electrodes. It was natural to assume that the chlorine was the causative agent. Bettman[3] had observed in March 1897 two patients whose skins were diffusely pigmented, dark, rough and dry, in whom were observed small tenacious comedones associated with numerous small follicular abscesses. Subsequently he reported twenty-one additional cases with similar symptoms in workmen who were engaged in cleaning out an acid tower used in the manufacture of hydrochloric acid. At no time did these men come in contact with free chlorine, but numerous loose

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1. White, Prosser: The Dermatergoses, ed. 3, New York, Paul B. Hoeber, Inc., 1934.

2. Herxheimer: München. med. Wchnschr. 46:278, 1899.

3. Bettman: Deutsche med. Wchnschr. 27:437, 1901.

derivatives of coal tar were present. Herxheimer later absolved the chlorine but considered the trouble to be due to various chlorbenzenes.

From time to time other reports of the occurrence of "chlor-acne" have been made in the European journals, each author continuing the error of Herxheimer in assuming that the cause of the condition was chlorine. Some of these reports have been indefinite as to the chemical conditions under which the men worked, except that they were exposed to chlorine gas. However, some authors have suspected various chlorbenzene derivatives, such as hexa-chlorbenzene, hexa-chlorethylene, para-nitrobenzene, perchlornaphthalene ("perna") and probably others. Chlorinated naphthalene was first indicted by Wauer[4] in 1918 as a cause of acneform eruptions of the skin, the condition being called *Perna krankheit*. His observations were confirmed by Koelsch[4] and recently by Teleky.[7] The latter reported an exhaustive study of a large number of cases occurring in workers engaged in the manufacture of perchlornaphthalene, in which the workers were exposed to fumes of the molten mass and also to the sublimated dusts. In approximately one-half of the workers exposed there developed comedones of a particularly heavy and tenacious type with resultant sebaceous abscesses, containing heavy yellow pus and serum. Considerable improvement resulted when the chlorine content of the mass was decreased from 30 per cent to 8 per cent, and Teleky believed that the disease was due directly to the halogen content of the substance. He mentioned the similarity of the disease to *teeracne* (tar acne) but carried the analogy no further. Individual predisposition appeared to alter receptivity.

Some authors have leaned to the view that the acneform eruption is due to direct external contact with the chemicals (notably Bettman, Hallopeau, Jacquet, Fumouze, Teleky and Koelsch[8]). Others (Lehmann, Herxheimer, Jacobi, Roth and Kobert[9]) considered it to be a

4. Occupation and Health: Encyclopedia of Hygiene, Pathology and Social Welfare, International Labour Office, Boston, World Peace Foundation, 1925, brochures 34 and 285.

5. Wauer, cited in Occupation and Health: Encyclopedia of Hygiene, Pathology and Social Welfare, International Labour Office, Boston, World Peace Foundation, 1925, brochure 34.

6. Koelsch, F., in Ullmann, K.; Oppenheim, M., and Rille, J. H.: Injuries to the Skin, Leipzig, Leopold Voss, 1926, vol. 2, p. 303.

7. Teleky: Klin. Wchnschr. 6:845 (April 30): 897 (May 7) 1927; 7:21 (Jan. 29) 1928.

8. Bettman; Hallopeau; Jacquet; Fumouze; Teleky, and Koelsch, cited in Occupation and Health: Encyclopedia of Hygiene, Pathology and Social Welfare, International Labour Office, Boston, World Peace Foundation, 1925, brochure 285.

9. Lehmann; Herxheimer; Jacobi; Roth, and Kobert, cited in Occupation and Health: Encyclopedia of Hygiene, Pathology and Social Welfare, International Labour Office, Boston, World Peace Foundation, 1925, brochure 285.

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