1

DERMATITIS IN THE U.S. WORKING POPULATION, 1988. Carol A. Burnett. National Institute for Occupational Safety and Health, Cincinnati, OH

In 1988, the National Health Interview Survey, a continuous national household survey of the non-institutionalized, civilian population, included a supplement on occupational health, including questions on dermatitis. Interviews were completed on 30,074 adults who had worked in the last 12 months. From the survey, US estimates were made. An estimated 11.8%, or 14,960,000 working persons, reported having dermatitis in the last 12 months, 10.9% of the men and 12.9% of the women. The most common body parts mentioned were the hands, arms, and head, neck or face. For 14% the rash lasted less than a week but 23% reported having a rash for a year. 5% of the persons with dermatitis reported that they had missed a day or more of work and 2.3% reported that the dermatitis had caused them to stop work, change jobs, or make major changes in their work activities. 22.6% reported that the dermatitis was caused by exposure to a chemical or substance, for a 12 month prevalence of 2.8%.

2,301,000 or 15.4% of the persons with dermatitis reported that it was caused by an exposure at work. This is a rate of 170 cases per 10,000 persons in the working population. This compares with a rate of 1.2/10,000 workers reported by the Bureau of Labor Statistics in 1994 and rates of from 1.2 to 8.4/10,000 from various state workers compensation programs. Interestingly, fewer than a quarter of the persons claiming work-related dermatitis in our study reported it to their employer and fewer than 2% filed a workers compensation claim, although 3.8% of the persons with work-related dermatitis had stopped work or changed jobs and 4.9% had made a major change in their work activity because of the skin condition. This survey indicates a rate of occupational dermatitis much higher than previously reported.

2

THE FREQUENCY OF ATOPIC DERMATITIS AMONGST ETHNIC CHINESE, VIETNAMESE AND CAUCASIAN INFANTS IN AUSTRALIA. A. Mar, R. Marks. The University of Melbourne, Department of Medicine (Dermatology), St Vincent's Hospital Melbourne, Fitzroy, Victoria, Australia 3065.

The frequency of atopic dermatitis amongst ethnic Chinese, Vietnamese and Caucasian infants was determined in 182 children followed for the first 12 months of life (61 Chinese, 59 Vietnamese and 62 Caucasian). Twenty seven Chinese (44%), 10 Vietnamese (17%) and 13 Caucasian (21%) infants developed atopic dermatitis, being a significant difference in the frequency between the Chinese and the Caucasian and Vietnamese infants.

Maternal age at delivery and mean birth weight was similar in all groups, but breastfeeding for more than six months was recorded in 30% of Chinese, 36% of Caucasian and only 9% of Vietnamese. Plush-pile carpeting was noted in the homes of 82% of Chinese, 78% of Caucasian and 26% of the Vietnamese. Detached housing accomodation was recorded in 75% of Chinese, 97% of Caucasian and 28% of Vietnamese.

The clinical manifestation of atopic dermatitis is believed to be a combination of genetic or constitutional predisposition plus environmental exposure to those factors which precipitate the disease. The difference between the frequency of atopic dermatitis in the Chinese and Caucasian babies may reflect genetic factors. On the other hand, ethnic Chinese and Vietnamese are believed to have a common genetic pool from the very distant past. Therefore the difference in frequency in atopic dermatitis between the Vietnamese and Chinese infants in this study may highlight the importance of environmental factors in determining likelihood of clinical disease in people who are predisposed to develop it.

3

ACNE-SPECIFIC QUALITY OF LIFE QUESTIONNAIRE (ACNE-QOL):MEASUREMENT CHARACTERISTICS. Allison R. Martin, Cynthia J. Girman, Alison A. Botek and Donald P. Lookingbill, Merck Research Laboratories, West Point, PA and Pennsylvania State University College of Medicine, Hershey, PA

The impact of acne on health-related quality of life has not been well quantified due to a lack of instruments specific to facial acne. A new questionnaire (Acne-QoL) has been shown to be easily administered and to contain items which are understandable and relevant to facial acne patients. The objective of this study was to assess the test-retest reliability and ability of the questionnaire to detect change over time or 'responsiveness', following usual care. Twenty-four male (mean age 16) and 27 female (mean age 21) patients were recruited from a dermatology clinic. Patients who had received topical or systemic treatment within the prior 2 or 4 weeks and those who were prescribed isotretinoin were excluded. Patients completed the Acne-QoL at weeks 0, 1, 8, 12 and 16. Lesion counts using a facial template and acne severity ratings were obtained. Although not a placebo-controlled trial, responsiveness was assessed by changes in domain scores over a 12 or 16 week period using a paired t-test. Physician gradings of mild, moderate and severe acne among the sample were 22%, 64% and 13%, respectively. Test-retest reliability was very good (intraclass correlation coefficient: 81 to .89). Significant improvements in Acne-QoL domain scores following usual care therapy were observed with mean score changes of 30, 23, 28 and 21 among the Self Perception, Role-social, Role-emotional and Acne Symptoms domains, respectively (100 point scale) ($p<0.05$). In addition, substantial score changes were observed among all severity groups, with larger changes among the more severe patients, as expected. The results of this study suggest that the Acne-QoL is a reliable instrument which can be used to quantify the effect of facial acne on health-related quality of life. The use of the Acne-QoL should aid physicians in understanding the impact of facial acne on young adults, and may be useful in assessing therapeutic effects in acne clinical trials.

4

RISK FACTORS FOR REPEATED HOSPITALIZATION AND DEATH IN PATIENTS WITH BULLOUS PEMPHIGOID (BP): FIRST RESULTS OF A MULTICENTER SURVIVAL ANALYSIS. B. Rzany, M. Jung, K. Partsch[1], I. Büchner[2], D. Mecking[3], H.W. Keiser[3], M. Meurer[2], G. Messer[1], Departments of Dermatology, Medical School Mannheim, D-68135 Mannheim, [1]Ludwig-Maximillians-University, D-80337 München, [2]Technical University Carl Gustav Carus, D-01307 Dresden, [3]University of Bonn, D-53105 Bonn, Germany. Bullous pemphigoid (BP) is the most frequent autoimmune bullous disease. Little is known on factors that influence the prognosis. We here report first results of a retrospective cohort study on risk factors for repeated hospitalization and death in patients with BP. The study is conducted concurrently in four centers comprising patients diagnosed with BP from 1986-1997. The patients were recruited based on admission records and/or immunofluorescence findings. A total of 500 patients is expected to be included finally. Univariate (Kaplan-Meier) and multivariate (Cox regression analysis) was performed using SAS©. We report on 60 patients (45% females) with a mean age ± standard deviation (SD) of 76.5 years (SD 12.5). Based on a response rate of 70% and a follow-up period of 2.4 years (SD 3.11) we were able to find increased multivariate risk estimates [95% Confidence Intervals] for repeated hospitalizations of 7.8 [1.1, 58] for mucous membrane involvement, 8.3 [1.3, 56.1] for elevated BP antibody titers (≥ 1:5160 / 75% quantile) and 9.4 [1.3, 66] for elevated glucose levels ≥130 mg/dl. These estimates were controlled for age and gender. For death the major risk factor was age with a multivariate risk estimate of 13.4 [2.3, 79.7] for >79 years (median) at admission. The only other risk factor that remained was a higher dosage of glucocorticosteroids at discharge (>40 mg / 75% quantile) with 3.7 [0.8, 16.6] when controlling for age and gender. For the first time, we were able to identify variables for an increased risk of hospitalization and death in patients with BP. Patients with BP and mucosal involvement, elevated antibody titers and glucose levels have to be closely monitored to prevent repeated hospitalization. Death in BP patients is mainly associated with age. So far no other risk factor could be identified besides a higher dosage of glucocorticosteroids at discharge which might point to an increased severity of the disease or a higher incidence of glucocorticosteroid related complications.

5

Epidemiologic aspects of hay fever

T.Schäfer[1], A. Nieuhaus[2], D. Vieluf[3], J. Berger[2], J. Ring[1]
[1] Dept. of Dermatology, Munich Technical University, Germany
[2] Dept. of Medical Statistics and [3] Dermatology, Hamburg University, Germany

Hay fever is one of the most frequent atopic diseases, but data based on a general population cohort are scarce. Beside parental predisposition the number of siblings seems to influence the risk of getting diseased. We aimed to give a valid estimate of the prevalence of the disease based on a general population cohort in Germany and to further analyze the influence of basic and demographic variables.

Within an environmental health study in three locations of the City of Hamburg we investigated a total of 734 adults (mean age 41.3 years, 50.7% female). We used a standardized questionnaire based interview taking relevant confounders for hay fever into consideration.

15.7% of the interviewed subjects reported to suffer from hay fever. Prevalence was highest in the second decade (26.7%) and showed a linear decline with increasing age (Mantel-Haenszel trend test: $p = 0.042$). In bivariate analysis the risk of tweas was significantly elevated as compared to the highest age category (OR 2.54, CI 1.36 - 3.37). We observed no significant sex differences, although women reported hay fever more often (17.4%) than men (14.0%). Parental predisposition was also identified as important risk factor. 36.2% had hay fever if at least on parent also had a positive history as opposed to 12.9% when the family history was negative (OR 2.40, CI 1.22 - 4.65). There was a linear trend of increasing hay fever prevalence with decreasing number of siblings (MH trend test: $p = 0.020$). The risk of subjects without siblings in comparison to subjects with more than 3 siblings was significantly increased (23.9% vs. 10.4%; OR 2.64, CI 1.14 - 6.23). Using multiple logistic regression we investigated the influence of age, sex, location, parental predisposition, SES, smoking and number of siblings. The measures of association for age, parental predisposition, and number of siblings remained almost unchanged, although the result for family size lost statistical significance. We conclude that beside a genetical impact the family size seems to play a role in the disease manifestation. The frequency of contact with infectious agents and a corresponding stimulation of the immune system were hypothesized as possible explanation.

6

Prevalence of stigmata of atopic constitution and its relation to atopic eczema: a population based investigation of pre-school children

T.Schäfer[1], D. Vieluf[2], U.Krämer, H.Behrendt[4], J.Ring[1]
[1] Dept. of Dermatology, Munich Technical University, Germany
[2] Depts. of Dermatology and [4] Experimental Dermatology, Hamburg University, Germany
[3] Medical Institute of Environmental Hygiene, Düsseldorf, Germany

The prevalence of stigmata of atopic constitution has rarely been estimated on the basis of a general population cohort and the evaluation of these stigmata in patients with atopic eczema was mostly done by using other hospital patients as controls.

We had the opportunity to dermatological examine a population based cohort of 1507 German preschool children (5-6 years, 49.4% female). The prevalence of nine common stigmata was determined using a standardized four-category grading system (absent, mild, moderate, severe) according to Przybilla B. et al. (Acta Derm Venereol (Stockh) 1991;71:407-10). In addition cases with atopic eczema were identified on a clinical basis. As controls we used children without actual or history of atopic diseases (atopic eczema, hay fever, asthma) and negative prick test to common allergens.

Almost all children exhibited at least one stigma of atopic constitution (96.7%). Thereby occurred no differences between boys (96.7%) and girls (96.8%). With respect to single stigmata the prevalences were 75.8% low hairline, 62.7% infraorbital fold, 11.6% Hertoghes's sign, 35.1% hyperlinearity of palms, 26.7% hyperlinearity of soles, 20.0% facial pallor, 46.3% orbital darkening, 60.7% sebostasis, and 25.9% white dermographism. 171 (11.3%) children had actual atopic eczema at the time of investigation. All stigmata except low hairline (OR = 1.41) were significantly associated with atopic eczema (OR: 2.10 - 5.48). Only 3 i.e 4 stigmata were significantly associated with a history of hay fever or asthma. When comparing the graded categories of each stigma with the prevalence of atopic eczema a significant linear trend of higher eczema prevalence with increasing severity of stigmata was observed for all signs of atopy (Mantel-Haenszel trend test: $p < 0.00001$, $p = 0.003$ for low hairline). We conclude that stigmata of atopic constitution preferably represent an atopic skin condition and that their severity can validly be assessed.

VOL. 110, NO. 2 FEBRUARY 1998

1

DERMATITIS IN THE U.S. WORKING POPULATION, 1988. Carol A. Burnett. National Institute for Occupational Safety and Health, Cincinnati, OH

In 1988, the National Health Interview Survey, a continuous national household survey of the non-institutionalized, civilian population, included a supplement on occupational health, including questions on dermatitis. Interviews were completed on 30,074 adults who had worked in the last 12 months. From the survey, US estimates were made. An estimated 11.8%, or 14,960,000 working persons, reported having dermatitis in the last 12 months, 10.9% of the men and 12.9% of the women. The most common body parts mentioned were the hands, arms, and head, neck or face. For 14% the rash lasted less than a week but 23% reported having a rash for a year. 5% of the persons with dermatitis reported that they had missed a day or more of work and 2.3% reported that the dermatitis had caused them to stop work, change jobs, or make major changes in their work activities. 22.6% reported that the dermatitis was caused by exposure to a chemical or substance, for a 12 month prevalence of 2.8%.

2,301,000 or 15.4% of the persons with dermatitis reported that it was caused by an exposure at work. This is a rate of 170 cases per 10,000 persons in the working population. This compares with a rate of 1.2/10,000 workers reported by the Bureau of Labor Statistics in 1994 and rates of from 1.2 to 8.4/10,000 from various state workers compensation programs. Interestingly, fewer than a quarter of the persons claiming work-related dermatitis in our study reported it to their employer and fewer than 2% filed a workers compensation claim, although 3.8% of the persons with work-related dermatitis had stopped work or changed jobs and 4.9% had made a major change in their work activity because of the skin condition. This survey indicates a rate of occupational dermatitis much higher than previously reported.

Abstracts for the 1998 Annual Meeting International DermatoEpidemiology Association (IDEA)

Orlando, Florida, February 26, 1998

Inflammatory skin diseases

Abstr. #	Author(s)	Title
1	Burnett CA	Dermatitis in the U.S. working population, 1988
2	Mar A, Marks R	The frequency of atopic dermatitis amongst ethnic chinese, vietnamese and caucasian infants in Australia
3	Martin AR, Girman CJ, Botek AA, Lookingbill DP	Acne-specific quality of life questionnaire (Acne-QoL): measurement characteristics
4	Rzany B, Jung M, Partscht K, Buchner L, Mecking D, Kaiser HW, Meurer M, Messer G	Risk factors for repeated hospitalization and death in patients with bullous pemphigoid (BP): first results of a multicenter survival analysis
5	Schaefer T, Nienhaus A, Vieluf D, Berger J, Ring J	Epidemiologic aspects of hay fever
6	Schaefer T, Vieluf D, Kraemer U, Behrendt H, Ring J	Prevalence of stigmata of atopic constitution and its relation to atopic eczema: a population based investigation of pre-school children
7	Williams HC, McNally N, Phillips D, Britton J	A possible link between water hardness and atopic dermatitis
8	Iliev D, Tuor C, Elsner P	Are metalworker trainees with certain genetic pattern more prone to irritant contact dermatitis?
9	Naldi L, Peli L	Smoking, alcohol and the diagnosis of psoriasis. Results of a case-control study

0022-202X/98/$10.50 ·