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Considerations Concerning the Epidemiology of Occupational Dermatoses

To the Editor

Our erudite colleague, in his Letter to the Editor, has made a valiant effort to demonstrate that any piece of medical knowledge can be expanded upon, and made comments on our article [1], some erroneous and some others possibly reminiscent of cases of cognitive ignorance or mispresentation.

We clearly mentioned in our article that the firms included in our study received services by four qualified physicians—one senior, experienced specialist in occupational medicine "assisted" by three enterprise physicians specializing in occupational medicine. Assistance, also entailed training, supervision, and ensuring that there was consistency and uniformity in diagnosing and recording cases of occupational dermatoses. Additional supervision provided by another three senior, experienced, specialist physicians participating in this study ensured scientific quality assurance, which also included ascertaining that the same procedures and methods for diagnosis and for collection of data on possible causal factors were used by all four enterprise physicians throughout the study period. Intra- and interobserver variability was not considered, for two reasons: Firstly, because of the aforementioned strengthened supervision. Secondly, it is apparent that in our study we used clinical diagnoses rather than laboratory or paraclinical test results. There are drawbacks related to using clinical diagnosis in an epidemiologic study [2]. These were eliminated, as all four enterprise physicians had access to the same laboratory tests and dermatologists. As we stated in our article, in all borderline or obscure skin diseases, diagnosis was always confirmed by the same dermatologists of the same university dermatology department, where specialist laboratory and other investigations were also carried out, whenever indicated. This means that observations were complete and accurate and the reasoning sound. Diagnoses were made by similarly trained enterprise physicians. They used the same specific criteria for making the same diagnosis, adhering to these criteria throughout the study. They also used the same terms to refer to the same clinical condition. Thus, the single term used for each of the occupational dermatoses studied had the same meaning to all these physicians. Our colleague ignores and mispresents the statement already made by us that "our study has no external validity, but it certainly does have internal validity, as regards the population studied." Surprisingly, he is also questioning the real size of the study population from which our study sample was randomly selected! To this end, he conceals our having stated that original numbers of employees in each type of enterprise were different, clearly meaning that the percentages randomly selected in the various types of enterprises varied, so that 200 workers would constitute the sample in each of the 20 types. The total population studied was 9,576 workers, and among them hairdressers and kitchen staff—the numbers of whom were particularly doubted by him—were 231 and 400, respectively. First, we ensured that the smallest population group fully met our selection criteria, and then we proceeded with random sampling. We did not present details of selection by random sampling in each type of enterprise, because of the word limitation imposed by the journal, and because we did not think that our scientific ethics would be under suspicion just because we used well known random sampling correctly. In conjunction with routine, good occupational medicine practice procedures, we used the short and simple Nordic Occupational Skin Questionnaire (NOSQ-2002) [3], after we translated and culturally adapted it in accordance with established principles [4]. If he proves it invalid in a Greek population, we would be most interested in reading his validation study. Information on occupational skin ill health factors and related hazards was collected within the frames of good clinical governance, effective administrative procedures, and occupational hygiene surveys, which included measurable criteria for potential causal factors, appropriate to good occupational medicine practice [5], and recorded meticulously in the files kept by the enterprise physicians. In our research project, we tested workers with occupational acute and chronic dermatitis for antinuclear antibodies to establish whether they were either suffering from a systemic autoimmune disease or whether they were more likely to develop it in the future [6]. We certainly did not recommend that costly testing for nuclear antibodies be used as a routine screening test in all cases of dermatitis in occupational health practice, as our colleague misleadingly claims. Nevertheless, individual patients may be reassured by a series of normal results. Such reassurance might have its place in occupational health practice, when affordable. As mentioned in our article, our field study was combined with delivery of occupational medicine services. The results of nuclear antibody, patch or skin prick, and blood testing will be published in a separate article. We did not adjust our results for age. Exposure–response relationships have been reported between occupational exposure and skin symptoms [7]. A careful search of the literature on the causation of occupational dermatoses would reveal that a causal relationship between age and occupational dermatoses has never been established. This is in contrast to the unsubstantiated statement of our colleague that age should be considered a major confounding factor in our study. In fact, in the literature there is no agreement regarding age as a determinant of occupational dermatoses, as revealed in a classical review [8]. Furthermore, it has been shown that the age effect, when present, disappeared when correcting for occupation [9]. We recommend further investigations of a possible age effect on occupational dermatoses.

Our colleague did manage to secure one more publication, in which he has cited a few of his own publications. Sadly, however, he has wrongly criticized mostly minor aspects of our methodology—as if the perfect epidemiologic study really existed—and chose to ignore the major contribution of our study. The fact that it is the very first major epidemiologic study of occupational dermatoses in Greece, in which we revealed that 1,596 workers suffered from occupational dermatoses, indicating an urgent need for improvement of working conditions and of recording on a large scale across at least 20 different types of enterprises. Notably,

recording appears to be unfavorably looked upon by many employers and employees in Greece.

Conflicts of interest

All authors declare no conflicts of interest.

References

[1] Zorba E, Karpouzis A, Zorbas A, Bazas T, Zorbas S, Alexopoulos E, Zorbas I, Kouskoukis K, Konstandinidis T. Occupational dermatoses by type of work in Greece. Saf Health Work 2013;4:142–8.
[2] Friedman GD. Primer of epidemiology. New York (NY): McGraw-Hill; 1974, p. 30.
[3] National Research Center for the Working Environment, Copenhagen, Denmark. Nordic Occupational Skin Questionnaire (Short version), 2002. Available from: http://www.arbejdsmiljoforskning.dk/da/publikationer/spoergeskemaer/nosq-2002/engelsk; 2002 [accessed 30.10.05] [In English].
[4] Sala-Sastre N, Herdman M, Navarro L, De la Prada M, Pujol R, Serra C, Alonso J, Flyvholm M-A, Gimenez-Arnau AM. Principles and methodology for translation and cross-cultural adaptation of the Nordic Occupational Skin Questionnaire (NOSQ-2002) to Spanish and Catalan. Contact Dermatitis 2009;61:109–16.
[5] Bazas T. Occupational medicine subjects in practice. 2nd ed. Athens: Greek Management Association; 1998. p. 35–7. 87–89,101–104 [In Greek].
[6] Slater CA, Davis RB, Shmerling RH. Antinuclear antibody testing. A study of clinical utility. Arch Intern Med 1996;156:1421–5.
[7] De Joode BW, Vermeulen R, Heederik D. Evaluation of 2 self-administrative questionnaires to ascertain dermatitis among metal workers and its relation with exposure to metal working fluids. Contact Dermatitis 2007;56:311–7.
[8] Mathias CG. Contact dermatitis and workers' compensation: criteria for establishing occupational causation and aggravation. J Am Soc Dermatol 1989;20:842–8.
[9] Coenraads PJ, Nater JP, van der Lende R. Prevalence of exzema and other dermatoses of the hands in The Netherlands. Association with age and occupation. Clin Exp Dermatol 1983;8:495–503.

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