

Letter to the Editor

Chloracne

Dear Sir,

We read the very interesting communication by Violante in your February issue about a novel chemical agent that might have caused chloracne. We feel, however, that a few questions remain before the chloracne can really be ascribed to this agent.

Chloracne is known to be caused by chemicals that have a chemical structure which is different from dichlorobenzene: the causative chemicals are polychlorinated dibenzo-dioxins (PCDDs) and polychlorinated dibenzofuranes (PCDFs). The different congeners of these chemicals have different toxicities. Chloracne has also been ascribed to exposure to polychlorinated biphenyls (PCBs), but most cases are probably due to a contamination of the PCBs with the above-mentioned dioxins and dibenzofuranes. This situation is common: for example, the wood-preserving agent pentachlorophenol (PCP) is often contaminated with 8-chloro-dibenzo-dioxin.

It is possible that the case mentioned by the authors is not caused by the *o*-dichlorobenzene but by PCDD or PCDF as contaminant. Further

proof of the chloracne causing capability of *o*-dichlorobenzene would require a careful chemical analysis by GCMS on contamination by congeners of PCDD and PCDF. In addition, activation of the AH receptor in human or in animal tissue by the pure compound could give supporting evidence of its chloracnegenic effect: a bioassay (DR-CALUX) is currently available.

Pieter-Jan Coenraads

University Medical Center Groningen,
Groningen, the Netherlands

Nai-Jun Tang

Tianjin Medical University, Tianjin, China

References

1. Coenraads P J, Olie K, Tang N J. Blood lipid concentrations of dioxins and dibenzofuranes causing chloracne. *Br J Dermatol* 1999; 141: 694–697.
2. Violante F S, Milani S, Malenchini G, Barbieri A. Chloracne due to *o*-dichlorobenzene in a laboratory worker. *Contact Dermatitis* 2005; 52:108.