Hexachlorophene exposure in a young patient with soft tissue sarcoma

Sir,—We read with concern the correspondence from Hardell (1992; 49:743) who speculates on a causal relation between exposure to dioxin in hexachlorophene and the development of soft tissue sarcoma in a patient 17 years later. The author seems to be unaware of several considerations that would be relevant to the scientific establishment of a cause and effect relation in this case. Firstly, dioxin has not been shown to be carcinogenic in humans. Secondly, the daily dose of dioxin to which the patient may have been exposed was unknown, and based on the level alleged to be present in hexachlorophene, would be minuscule. The concept of dose-response, which is fundamental to medicine, has never been shown to be inappropriate for chemical carcinogenesis. Thirdly, other possible exposures (chemical or otherwise) before, concurrent with, or subsequent to the exposures to hexachlorophene were not considered. The possibility of an idiopathic aetiology was also not mentioned. Although it is important accurately to assess the carcinogenic risk of chemicals, this goal is not advanced when unsubstantiable speculation is published in medical journals. Unfortunately, Hardell’s letter may be cited in the future as support of a cause and effect relation for dioxin and cancer that is not scientifically justified by the information presented. Finally, to propose such an unsupported relation is to reinforce falsely the common chemophobia that all human illness and disease are the result of exposure to “toxic chemicals.”

MARK J BEASOR
West Virginia University Health Sciences Center, Morgantown, WV 26506-9223, USA

MARK R MONTGOMERY
Veterans Administration Medical Center and University of South Florida, Tampa, FL 33612, USA

Author’s reply:
We have published case reports on soft tissue sarcoma and non-Hodgkin’s lymphoma2 in patients exposed to hexachlorophene. We believe that these clinical observations are of interest due to the contamination of dioxins, including 2,3,7,8-TCDD (TCDD), in hexachlorophene.3,4 In previous case-control studies we found an association between soft tissue sarcoma5-8 and malignant lymphoma,9,10 and exposure to phenoxy herbicides or chlorophenols, which are chemically related to hexachlorophene. Two recent studies have verified an association between exposure to phenoxyacetic acids, chlorophenols, or TCDD and soft tissue sarcomas.11,12 A carcinogenic effect by exposure to TCDD— that is, an effect on all cancer sites combined, has been shown in three cohorts.13,14 In a meta-analysis of our four case-control studies of soft tissue sarcoma a dose-dependent increased risk for soft tissue sarcoma was associated with exposure to TCDD and other dioxins, assessed as exposure to phenoxy herbicides or chlorophenols contaminated with TCDD and other isomers.13 Also, TCDD is carcinogenic in animals16,17 and is hexa-CD, including an increased incidence of soft tissue sarcoma.18,19