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## MELANOMA AFTER EXPOSURE TO PCB'S

*To the Editor:* We wish to report a possible new carcinogenic hazard. Arochlor 1254, one of the polychlorinated biphenyls (PCB's), was used by a petrochemical plant in the Northeast in certain processes during a nine-year period ending in the late 1950's. A preliminary analysis of the incidence of malignant neoplasms among workers who handled this compound, based upon information provided by the medical director of the plant, has been made (this preliminary report would not have been possible without the prompt attention to this potential problem and the research co-operation given by the company).

Of a total of 31 men believed to have been heavily exposed to this agent, two malignant melanomas are known. On the basis of a person-year analysis and with use of the Third National Cancer Survey incidence rates as the standard[1] only 0.04 malignant melanomas would be expected. These data are significant at the 0.001 level, given the assumptions of our statistical model. An additional malignant melanoma is also known for one of 41 employees in another group believed to have had less exposure.

Although the data are based on small numbers and the study is still in progress, there are biologic grounds for assuming an association between PCB and malignant melanoma: chloracne dermatitis upon industrial exposure to PCB[2,3]; and acneform eruptions of Japanese women and pigmentation of the skin of these women and their offspring due to accidental ingestion of rice oil contaminated with a PCB compound (Kanechlor 400).[4]

PCB's have had widespread industrial use in the manufacture of capacitors and transformers. PCB's have been used in industry in fluids for hydraulic and heat transfer systems, fire retardants, plasticizers, wax additives for investment castings, electrical components, adhesives and food-packaging materials. They are a known pollutant of certain water-supply systems, and their persistence in the environment is of widespread concern.[5,6]

Further study of this possible carcinogenic association is warranted. Because early detection of malignant melanoma may markedly affect survival rates, surveillance for melanoma among those exposed should be considered. The experience with this small study demonstrates the value of incidence as well as mortality rates in historical prospective studies designed to search for occupational cancers.

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