

Solvent exposure and myelodysplastic syndrome

An editorial in the *British Medical Journal* (1) recently pointed out that the etiology of myelodysplastic disorders is totally unknown, although these conditions frequently evolve to leukemias and have an unfavorable prognosis. Previous surveys have estimated that their incidence rate is approximately 10 to 40 new cases per million of the population per year (1, 2).

We have conducted a pilot study interviewing all newly diagnosed cases of leukemia or myelodysplastic syndrome in the Main Hospital of Torino, Italy, during the period October 1988 to December 1989 (patient ages 15-74 years). The 79 cases we have recruited represent about three quarters of all newly diagnosed cases in residents of the province of Torino in the same age group.

All of the patients have been interviewed by an expert interviewer, and a detailed occupational history has been collected. Exposure to solvents has been assessed by one of us blindly from details of the occupational histories. Exposure was assessed according to the categories "certainly exposed," "possibly exposed," and "unexposed."

Exposure to organic solvents is highly prevalent in the area. From previous case-referent studies, we have estimated that about 10 % of the men aged 20-74 years have been occupationally exposed to organic solvents in their lives (3). Among nine patients affected by chronic lymphatic leukemia, one was certainly exposed and none possibly exposed to solvents; among 12 patients with chronic myelogenous leukemia, three were certainly and one possibly exposed; among nine acute lymphatic leukemia cases, two were certainly exposed and none was possibly exposed; and among 34 acute myelogenous leukemia cases, three were certainly exposed and five were possibly exposed. Finally, in the group of 15 myelodysplastic syndromes (MDS), five subjects were certainly exposed to organic solvents and three were "possibly" exposed. The proportion of exposed subjects among those affected by MDS, therefore, exceeded by far the proportion expected in the same age group. "Certainly exposed" subjects were two male mechanics, who polished metal surfaces with chlorinated solvents, a third man employed in the rubber industry (mixing), a woman work-

ing in the shoe industry, and a woman employed in a laundry. In light of the known relationship between organic solvents (particularly benzene) and leukemias, the association with myelodysplastic disorders is worth studying.

References

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Paolo Vineis, MD, Giovannino Ciccone, MD, Martine Tedeschi

Unit of Cancer Epidemiology
Department of Biomedical Sciences and Human
Oncology University and Main Hospital of Torino
via Santena 7
I—10126 Torino Italy