

Internal Medicine News

12230 Wilkins Avenue, Rockville, Md. 20852 (Phone: 301 770-6170)

WILLIAM RUBIN, *Editor*

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2 January 1975

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Dr. John L. Creech, Jr.
806 Medical Towers
Louisville, Kentucky

Dear Dr. Creech:

I thought you might like to see a copy of the article on your work that we are planning to run. We make every effort to maintain accuracy, but I would still appreciate your checking this copy. As this is a news report, not a journal paper, our publishing the article in no way implies authorization on your part. Although no one will hold you responsible for what we print, I know you share our concern that what we print is accurate. If there are any factual errors, please call us collect immediately.

I don't like to rush you on this, but our schedule does not leave us much time. If I don't hear from you within a week, I will assume that there are no errors.

If you have not already sent us illustrative material and your photograph, we would appreciate your doing so. This material can, of course, be returned.

Thank you for your cooperation.

Cordially,



Copy Editor

Enclosure

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Concern that exposure to vinyl chloride, the monomer of the plastic polyvinyl chloride, may cause liver cancer or other occupational disorders may be unnecessary for present workers, according to two physicians who have been treating workers from polyvinyl chloride plants for several years.

Greater concern for workers' health and safety and improved controls on exposure levels in the plants may have eliminated the danger before the connection between vinyl chloride and angiosarcoma was discovered, Drs. John L. Creech Jr., of Louisville, and V. K. Rowe, of the Dow Chemical Company, Midland, Mich., agreed in separate interviews with INTERNAL MEDICINE NEWS.

Fifteen workers have been reported with angiosarcoma, an exceedingly rare cancer that is always fatal. A more common condition associated with vinyl chloride exposure is acro-osteolysis, a skin disease characterized by blanching or pain in the fingers (Raynaud's syndrome); thickened, nodular patches of skin on the hands; and the disintegration of the distal bones of the fingers.

Dr. Rowe told this newspaper that he feels that present workers in vinyl chloride plants do not face a very great hazard of either angiosarcoma or skin disease because exposure levels in most plants making polyvinyl chloride are now much lower than they were previously.

There have been no reports of vinyl chloride-related health problems at the Dow plants, where operations have maintained consistently low levels of exposure. Apparently the protective measures already in effect have been adequate to prevent angiosarcoma, acro-osteolysis, or scleroderma, he said.

Dr. Creech, who has seen many of the reported cases of angiosarcoma and was the first to recognize the association of the liver tumors with vinyl chloride exposure, agreed that there is probably little danger for present workers.

Both the acro-osteolysis and the angiosarcomas were found mainly in those workers who cleaned out the reaction kettles, where the levels of vinyl chloride were in the range of hundreds of thousands of parts per million. Workers in the same job may now face no exposure whatsoever because they work with a self-contained respiratory system that eliminates all atmospheric particles of vinyl chloride, he said.

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None of the patients with angiosarcomas had skin diseases that could be related to their vinyl chloride exposure. Of cases of acro-osteolysis observed by Dr. Creech, no patients had any detectable liver abnormalities.

Because of the observed carcinogenic activity of vinyl chloride and the association between the plastic and various skin disorders, it seemed likely that an increased incidence of skin tumors might be found in exposed workers. However, no such increase was found, and there were no skin tumors in any of the patients with angiosarcomas, liver changes, or splenomegaly that could be attributed to vinyl chloride, Dr. Creech said.

Despite the report of one person who developed angiosarcoma after living downwind from a polyvinyl chloride plant, there is probably no danger to people living around such plants, he said.

Since even workers within the plants who worked within 10 feet of the reaction kettles have not developed the cancer, it seems that the small amounts of vinyl chloride that might escape to the outside would have little effect. The one reported case was probably a chance occurrence, Dr. Creech suggested.

There is also evidence that angiosarcomas produced by vinyl chloride and other angiosarcomas are two different entities. Cases that have been reported that are not related to vinyl chloride often have distant metastases of the tumor, most frequently to the lungs.

None of the patients with angiosarcoma linked to vinyl chloride have distant metastases, although some have had spread of the cancer to the lungs by direct extension, invading through the diaphragm, he said.

While this may be small comfort to patients who now face a certain death from the disease, the absence of metastases has proven to indicate a good prognosis in other types of cancer.

end

Dr. John L. Creech, Jr., 806 Medical Towers, Louisville, Kentucky

Dr. V. K. Rowe, Dow Chemical Company, Midland, Michigan

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