VC 5.2.0

THE WALL STREET JOURNAL, MONDAY, MAY 13, 1974

Scientists Hear Reports Vinyl Chloride May Be More Dangerous Than Realized

By BARRY KRAMER
Staff Reporter of THE WALL STREET JOURNAL

NEW YORK—Scientists from around the world at a hastily organized meeting on the health hazards of vinyl chloride heard disturbing indications that the danger to workers in the plastics industry may be more widespread than first realized, and that the chemical may also pose environmental and public-health problems.

Vinyl chloride, a gas used since World War II to make polyvinyl chloride, or PVC a solid plastic with ubiquitous industrial and consumer applications, has been linked recently with 20 cases world-wide of a rare and usually fatal form of liver cancer, angiosarcoma, in workers at plants where vinyl-chloride gas is produced or where it is polymerized into the plastic. Thirteen of the angiosarcoma cases, only two of whom are still alive, are in the U.S.

At the two-day conference, sponsored by the New York Academy of Sciences, the American Cancer Society, the National Institute for Occupational Safety and Health and other groups, scientists reported a growing list of health problems they have labeled collectively "vinyl chloride disease." From West Germany, Rumania, Japan and the U.S., scientists reported that the symptoms, found in a significant number of vinyl-chloride workers, include enlarged livers and spleens, deliterious blood changes, skin eruptions, pathology of the bones of the fingers, restricted blood circulation and lung function and even, in Rumania, sexual impotence that disappeared when the afflicted workers left the vinyl-chloride plant.

Most Unsettling Report

But the most unsettling report came from scientists at Bonn University, who reported finding serious liver disease in six workers at a plant that turns PVC plastic into floor tiles. Until now, it had been thought the danger was limited to workers in direct contact with the vinyl-chloride monomer, who number about 6,500 in the U.S. But if the hazard extends to workers down the line who melt, mold, form, extrude, shape and otherwise fabricate PVC into pipes, packaging film and bottles, flooring, apparel, automotive parts, home furnishings, wire coatings and myriad other products, a much larger number of workers —some estimates say as many as 700,000— could be exposed to the danger.

The Bonn scientists didn't find liver cancer in the floor-tile workers, but they described the liver disease as possible precursers to angiosarcoma. Similar liver changes were reported among U.S. vinyl-chloride-monomer workers.

The largest effort to seek out present and former vinyl-chloride workers who may have been sickened by working with the chemical has gone on in the U.S., which produces about 25% of the world's PVC, with sales of over $12 billion. Since an alert company physician, Dr. John L. Creech, discovered in January that two vinyl-chloride workers at the B. F. Goodrich Co. facility in Louisville, Ky., had died of angiosarcoma, a total of seven cases of angiosarcoma have been found at the Louisville plant, two of whom are alive, three cases at the Niagara Falls, N.Y., plant of Goodyear Tire & Rubber Co., two cases at the South Charleston, W.Va., plant of Union Carbide Corp., and one at the Pottstown, Pa., facility of Firestone Tire & Rubber Co. Seven other cases have been found abroad.

Other Forms of Cancer

Reports at the conference also hinted at the possibility that vinyl-chloride workers may have contracted other forms of cancer beside the rare liver form. A survey of 8,384 present and former vinyl-chloride workers done for the Manufacturing Chemists Association found that overall death rates compared favorably with the general population, but that vinyl-chloride workers, especially those with longer exposure to the substance, showed increased risk of cancers of the liver, lung, lymphatic system, brain and urinary organs.

Another study, of workers at Goodyear's Niagara Falls plant, found that while four deaths from all types of cancer could have been expected statistically among the 257 workers studied, there had been nine cases.

While several studies showed that the danger of vinyl chloride increased the longer the exposure to it, it isn't known whether low levels of exposure are safe. The Italian scientist, Dr. Cesare Maltoni, whose studies showed as early as 1972 that vinyl chloride at high levels in the air caused angiosarcoma in mice, but whose studies were ignored until the human cases were uncovered, has since reported that mice exposed to as little as 50 parts per million in the air also got the cancer. Fifty parts per million is the current emergency standard in vinyl-chloride plants set recently by the Labor Department, although the agency proposed last week tougher permanent standards that would limit air levels of vinyl chloride in plants to under one part per million.

"Zero Tolerance" Standard

The Society of the Plastics Industry has already condemned the proposed "zero tolerance" standard as "excessively and unrealistically restrictive," claiming that the standard would make it "virtually impossible for plants to operate." In a separate statement, B. F. Goodrich called the proposed limits impractical and unjustified by the situation. The temporary 50-parts-per-million standard, which replaced a long-time standard of 500 parts per million, is expected to stay in effect for up to six months.

While the Food and Drug Administration and the Environmental Protection Agency have ordered recalls of hairsprays and pesticide sprays whose propellent is vinyl chloride, there isn't any evidence that consumers have been exposed to dangerous amounts of the substance.

But an EPA study, based on theoretical use of vinyl-chloride-containing sprays, indicated that some consumers may have been exposed to air concentrations of the chemical above that currently allowed in industry.

"The risk may be smaller in the general population, but we're dealing with a much larger group of people than the industrial vinyl-chloride workers," said Dr. Kenneth Bridbord of the EPA's Human Studies Laboratory.

The EPA is currently surveying emissions of vinyl-chloride gas into the atmosphere and water found around factories nationwide to help determine if the health of people living around the plants may be endangered. Glenn E. Schweitzer, director of the EPA's Office of Toxic Substances, told the conference an estimated 200 million pounds of vinyl chloride are discharged into the atmosphere from U.S. vinyl-chloride-polymerization plants each year.

He called on industry to help support studies of populations around such plants who may have been exposed to low levels of vinyl-chloride for long periods of time.

CUSAROSS 02828