

ANGIOSARCOMA, PORPHYRIA CUTANEA TARDA AND PROBABLE CHLORACNE IN A WORKER EXPOSED TO 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN-CONTAMINATED WASTE OIL. R McConnell, K Anderson, W Russell, K Anderson, R Clapp, E Silbergeld, P Landrigan. Division of Environmental Medicine, Mount Sinai School of Medicine, New York, NY 10029, JSI Center for Environmental Health Studies, Boston, MA, U. of Maryland School of Medicine, Baltimore, MD.

This report describes the case of a worker exposed to TCDD-contaminated oil in Missouri, who subsequently developed a soft tissue sarcoma, porphyria cutanea tarda (PCT), and probable chloracne. The patient was a 59 year-old white male truck driver who had been exposed to soil contaminated with TCDD in oil sprayed to suppress dust in a trucking terminal in the early 1970's. Analysis of soil samples at the worksite in 1983 revealed TCDD levels up to 17 parts per billion. The patient developed a rash in sun-exposed areas of his body in 1981, and later developed blistering and increased hair on the backs of his hands. This was diagnosed as PCT based on histologic and laboratory findings; in particular, urinary uroporphyrin and 7-carboxylate porphyrin and fecal isocoporphyrin were markedly increased. There was no family history of PCT.

In 1983, the patient underwent a CT scan and surgical biopsy and was diagnosed with angiosarcoma arising in the iliac bone. During the following year, the patient lost 66 pounds and developed an acneiform rash on his face and behind both ears. Skin biopsy revealed actinically damaged skin with mild epithelial dysplasia, prominent solar elastosis, and increased mucinous deposition within the dermal connective tissue. There were multiple comedones, most of which were associated with large sebaceous components. The patient died in September, 1984, as a result of his angiosarcoma.

This case supports the etiologic relationship between environmental exposure to TCDD and subsequent development of soft tissue sarcoma and PCT. It also suggests that PCT and the recurrence of chloracne may occur with a latency of many years after exposure to TCDD.

A preliminary description of this patient's exposure and medical history was reported in 1984. A lawsuit filed by his widow came to trial in Spring, 1991 in St. Louis, Missouri. In July, 1991, a jury which had heard testimony from numerous medical and epidemiological experts returned a verdict awarding \$1.5 million to the patient's widow. This was believed to be the first personal injury verdict for the plaintiff involving dioxin exposure in the U.S. courts.

