An interesting observation in our study was that the mean serum bilirubin of our Ever PCP workers was significantly lower than in unexposed workers in the unadjusted analysis. This difference did not remain significant after adjusting for age and current alcohol consumption. Two previous studies have noted a decreased bilirubin in PCDD exposed workers. Baxter found a significantly lower total bilirubin among PCP production workers in the United Kingdom compared to unexposed workers[Baxter]. May found a lower serum bilirubin in TCDD exposed workers with chloracne 10 years after last exposure[May]. The mechanism by which PCDDs may lower serum bilirubin is also unknown, though some investigators have suggested that PCDDs may induce bilirubin glucuronyl transferase[May].

Our PCP workers with chloracne had significantly elevated mean urinary excretions of coproporphyrin compared to the unexposed after control for potential confounders. There were no significant differences in the urinary excretion of uroporphyrins and none of participants had a history of porphyria cutanea tarda. The pattern of porphyrin excretion in our workers with chloracne is consistent with a low grade coproporphyrinuria or a transition constellation to the initial phase of Type A hepatic porphyria. These are the earliest, subclinical stages in Doss's classification of chemically induced chronic hepatic porphyria[Doss].

Studies of porphyrin metabolism in TCDD exposed individuals have yielded conflicting results. In the two plants where workers were found to have clinical porphyria[Bleiberg, Pazderova], hexachlorobenzene may have been a confounding exposure[Jones]. Calvert et al did not find significant associations between serum levels of TCDD and porphyria cutanea tarda, uroporphyrinuria, or coproporphyrinuria in a cohort of workers who had been exposed to chemicals contaminated with TCDD more than 15 years earlier[Calvert]. Residents of Seveso have been found to have subclinical coproporphyrinuria compared to controls[Centen]. The only documented cases of porphyria cutanea tarda among Seveso residents occurred in a family with congenital uroporphorinogen decarboxylase (UROD) deficiency[Doss]. Studies of PCP exposed workers have also yielded

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