

Occupational exposure to vinyl chloride and liver diseases

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ABSTRACT

Portal hypertension, liver fibrosis, and angiosarcoma of the liver (ASL) have been reported among workers exposed to vinyl chloride monomer (VCM) since the 1970s. In 2007, the International Agency for Research on Cancer established the association of VCM with hepatocellular carcinoma (HCC), though only on the basis of the few cases available. Thereafter, recent reports from the United States cohort and a European sub-cohort of vinyl chloride workers provided compelling evidence of a strong association between cumulative VCM exposure and HCC risk. Further areas of research include the risk of liver cancer at lower levels of exposure and different patterns of risk of ASL and HCC with the time since exposure. The evidence of interaction between VCM exposure and other known liver carcinogens such as alcohol and chronic viral infection provides clues for the health surveillance of exposed workers. Notably, also the risk of VCM-associated chronic liver disease is modulated by alcohol consumption, viral infection, and genetic polymorphism. A counter-intuitive finding from cohort studies of exposed workers is the lower mortality from liver cirrhosis with respect to the general population; this can be attributed to the healthy worker effect and to the selection of liver cancer as the cause of death in the presence of concomitant chronic liver disease. Studies designed to overcome these intricacies confirmed an association between cumulative VCM exposure and the risk of liver cirrhosis.

FULL TEXT

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6737312/pdf/WJG-25-4885.pdf>