

the concept that the hepatocyte's ability to resist cancer transformation is dependent upon its ability to detoxify the mutagenic/carcinogenic metabolite of vinyl chloride.

This review of our present knowledge of vinyl chloride injury and cancer formation in man is, at best, a very rough hypothetical outline. With continued investigation and study it will allow us to more accurately and completely fill in the missing pieces of this fascinating puzzle, thus leading us to a better understanding of the pathogenesis of chemically induced cancer in the biologically complex human system.

REFERENCES

1. Elkins HB: The Chemistry of Industrial Toxicology. Second Edition. New York, New York, John Wiley & Sons Inc, 1950
2. Oettel H: In Ullmann's Enzyklopädie der Technischen Chemie. Third Edition, 5:489. Munchen-Berlin, Urban and Schwarzenberg, 1954.
3. Kunststoffkommission des Bundesgesundheitsamtes (Plastics Committee of the Federal German Ministry of Health), Bundesgesundheitsblatt, 8:369, 1975
4. von Ottingen WF: The Halogenated Aliphatic, Olefinic, Cyclic, Aromatic, and Aliphatic-Aromatic Hydrocarbons Including the Halogenated Insecticides, Their Toxicity and Potential Dangers. (PHS Publication No. 414). Washington, D.C., Government Printing Office, 1955
5. Oster RH, Carr CT, Krantz JC, et al: Anesthesia XXVII. Narcosis with vinyl chloride. 8:359-61, 1947
6. Schottek W: The toxicity of vinyl chloride. Chem Techn 21:708-711, 1969
7. Gauvain S: Vinyl chloride. Proc Roy Soc Med, 69:275-310, 1975
8. Braun P, Druckman E, Eds: Public-health rounds at the Harvard School of Public Health. Vinyl chloride: Can the worker be protected? New Eng J Med 294:653-657, 1976
9. Selikoff IJ, Hammond EC, Eds: Toxicity of vinyl chloride—polyvinyl chloride. Ann NY Acad Sci 246:1-337, 1975
10. Irish DD: In Aliphatic halogenated hydrocarbons, Industrial Hygiene and Toxicology. Second Edition. Edited by FA Patty. New York, Interscience Publishers, 1963, 2:1241-1332
11. Mastromatteo E, Fisher M, Christie H, et al: Acute inhalation toxicity of vinyl chloride to laboratory animals. Amer Ind Hyg Assoc J 21:394-398, 1960
12. Lester D, Greenberg LA, Adams WR: Effects of single and repeated exposures of humans and rats to vinyl chloride. Amer Ind Hyg Assoc J 24:265-275, 1963
13. Filatova VS, Balakhonova I, Gronsberg ES: Hygienic characteristics of vinyl chloride production. Gig Tr Prof Zabol 2:6, 1958
14. Cordier JM, Fievez C, Lé Fèvre, et al: Acroosteolyse et lésions cutanées associées chez deux ouvriers, affectés au nettoyage d'autoclaves. Med Trav 4:14-19, 1966
15. Wilson RH, McCormick WF, Tatum CF, et al: Occupational acroosteolysis: Report of 31 cases. JAMA 201:577-581, 1967
16. Violi PL, Bigotti A, Caputo A: Oncogenic response of rat skin, lungs, and bones to vinyl chloride. Cancer Res 31:516-522, 1971
17. Maltoni C, Lefemine GL: Carcinogenicity bioassays of vinyl chloride I. Research plan and early results. Environ Res 7:337-405, 1974
18. Kepfinger ML, Goode JW, Gordon DE, et al: Interim results of exposure of rats, hamsters, and mice to vinyl chloride. Ann NY Acad Sci 246:219-224, 1975
19. Nicholson WJ, Hammond EC, Seidman H, et al: Mortality experience of a cohort of vinyl chloride—polyvinyl chloride workers. Ann NY Acad Sci 246:225-230, 1975
20. Star Series: Scientific and technical assessment report on vinyl chloride and polyvinyl chloride. EPA 600/6-75-004:48, 1975
21. Tabershaw IR, Gaffey WR: Mortality study of workers in the manufacture of vinyl chloride and polymers of vinyl chloride. J Occup Med 16:509-518, 1974
22. Tabershaw-Cooper Associates Inc: Supplementary epidemiological study of vinyl chloride workers I. Manuf Chem Assoc 5:1-30, 1975
23. Duck BW, Taylor KJW, Williams DMJ: Mortality study of workers in a polyvinyl chloride production plant. Lancet ii:1197-99, 1975
24. Waxweiler RJ, Stringer W, Wagoner JK, et al: Neoplastic risk among workers exposed to vinyl chloride. Ann NY Acad Sci 271:40-8, 1976

URL 19744