

Stasik MJ: Carcinomas of the urinary bladder in a 4-chloro-o-toluidine cohort. International Archives of Occupational and Environmental Health. 1988;60(1):21-4.

Abstract

In an historical mortality study, conducted on a cohort of 335 male employees in 4-chloro-o-toluidine (4-COT) production and processing plants, no deaths due to cancer of the urinary bladder had been identified. However, after completion of this study, urothelial carcinomas were recorded in eight of the employees, two of whom have died in the meantime (as of December 1986). All eight persons had been employed in the 4-COT production plant before improvements in industrial hygiene were introduced in 1970 (a subcohort of 116 men). This presumably higher level of exposure to monocyclic arylamines lasted for 14.0 years (median), and the total exposure time (before and after 1970) in the 4-COT plant was 25.5 years (median). The standardized incidence rate for urothelial carcinomas in the 4-COT subcohort was 73 times higher than expected and was comparable with the results obtained for polycyclic arylamines, which have been identified as human carcinogenic agents. On the basis of our results an association may be postulated between occupational exposure to 4-COT and carcinomas of the urinary bladder observed among production workers.

Key words

Urothelial carcinomas, Monocyclic arylamines, Latency, N-Acetylation phenotypes, Acetylators