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Foundy fumes exposure and chronic obstructive pulmonary disease

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Abstract

Chronic Obstructive Pulmonary Disease (COPD) is common, affecting 5 to 8 % of the general population. Mainly smoking leads to a syndrome of chronic mucus production with goblet cell hyperplasia and also to chronic airflow limitation with airways narrowing and emphysema. The aim of the study is to identify specific job in relationship with increase of COPD. We promote a case control study including a group of patients with COPD matched with controls without COPD. Tobacco smoke use was the same in the two groups. Ten jobs were suspected to increase incidence of COPD. Each subject of the two groups had a spirometry and filled a questionnaire, with the help of a medical occupational practitioner. Almost six hundred patients were included in each group. The main jobs suspected to increase COPD were welders, wood workers, farmers and plastic & metal workers… Foundry workers had six fold more COPD than controls, which was a statistically significant result. It is one of the first study including a consequent population of workers with a medical control of the data. Tobacco exposure was controlled and the result underlined that determined job exposure had a significant impact on COPD. Foundry fumes, including gas coke oven contained also complex toxic dusts. This result confirms that combination of occupational respiratory toxics and tobacco smoke enhances health impairment.

Biography

Professor DESCHAMPS is a medical doctor specialized since 1990 as toxicologist. His main topics are occupational health and diseases induced by low level and long time exposure to toxic substances. He has completed his Ph D (toxicology) in 1993 from Lille University. He is director of the Department of Occupational Health Department of the Medicine Faculty of Reims (Champagne/France). He manages the department of Occupational Diseases in the University Hospital of Reims for twenty years. He has published more than thirty papers in reputed journals concerning mainly toxicological topics. He is the main author of ten books meant to occupational practitioners and general practitioners.