CORRESPONDENCE

Absence of risk of colorectal cancer among workers at a UK polypropylene production plant

Editor—Concern about the possibility of an association between colorectal cancer and polypropylene was raised by a report of a 5·6-fold increase in incidence of colorectal cancer in a small cohort of polypropylene production workers in the United States.[1]

This letter describes the results of a study on the incidence and mortality of cancer in 384 workers employed at two polypropylene production plants at Carrington, Cheshire. The first plant opened in March 1972 and the second plant opened the next year. The cohort consisted of all workers employed at either plant for at least one year and the follow up period extended until June 1992. Information on vital status and cancer registration was obtained from the United Kingdom National Health Service Central Register. England and Wales rates of mortality and incidence of cancer were used to derive expected numbers of deaths and cancer cases.

Twenty eight deaths occurred during the study period of which 11 had an underlying cause of a malignant neoplasm. Notifications were received of 14 cancer registrations. Only the results for mortality and incidence of colorectal cancer are presented here. A single case of colorectal cancer has been reported (2·28 expected cases) and there have been no deaths due to colorectal cancer (1·36 expected deaths).

The earlier report of an excess of colorectal cancer was surprising as high molecular weight substances such as polypropylene are considered to be chemically inert with little or no physiological or toxicological effects and the monomer, propylene, showed no signs of carcinogenic activity in inhalation tests in rats and mice.[2] Other studies of the same workforce,[3,4] and evaluation of the additives and process agents present in the polypropylene manufacturing process, have not provided further aetiological leads. A study of workers employed in a pilot plant that produced polypropylene owned by the same company, showed no increased risk of colorectal cancer[5] and a recent update of the study of the polypropylene production workers from the United States that initiated the concern, has indicated no continuation of risk after the occurrence of the original cluster of cases.[6]

The absence of risk in the study described in this letter is consistent with other recent studies of polypropylene production workers in Australia[7] and Germany,[8] and further strengthens the argument against a causal relation between polypropylene and colorectal cancer. It should be noted, however, that the study has low power and the longest period of follow up is only 20 years.

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Isotretinoin induced rubber glove dermatitis

Editor—A 25 year old final year medical student presented to the occupational health unit during her obstetric attachment with a punctate, scaly, erythematous rash on the dorsum of both hands (figure). There was a clear association between the initial onset of the rash, exacerbations, and wearing of surgical gloves for obstetric delivery. She was advised to avoid wearing gloves and the symptoms resolved within a week. Further glove wearing did not reproduce symptoms.

She had worn a wide variety of gloves throughout her clinical training, including those associated with the rash. She had not had problems previously. She had a family history of atopy but had never experienced symptoms herself.

Four months previously she had started a course of isotretinoin (Roaccutane-Roche) for facial acne. The course finished one week after the glove rash resolved. She was on no other medication. Patch tests were carried out four weeks after the rash had resolved. The European standard battery of patch test allergens, as well as samples of all the gloves worn proved negative.

Isotretinoin induced susceptibility to the irritant effect of rubber gloves is the most likely explanation for this shortlived episode of dermatitis. Redness and dryness of the skin are well recognised side effects of isotretinoin; however this apparent ability to precipitate irritant contact dermatitis is less well known. There is only one other case of isotretinoin; associated contact dermatitis in the scientific literature and this followed the use of epilation wax for facial hair.[1]

Irritant and allergic contact dermatitis to gloves is a serious condition for health care workers with clinical contact. Infection control procedures dictate that sufferers must be removed from patient care. This has cost implications and may also result in psychological morbidity. In some cases permanent redeployment is necessary and in extreme cases retirement on grounds of ill health. Most health care workers with clinical contact are young women. This group is one of

Dorsum of hands showing a fine papular erythema.