Hairdresser tattoos, MWF and cytotoxic exposure

Temporary black tattoos often cause sensitization and skin reactions can occur if subjects are later exposed to hair dyeing. A recent Danish study investigated hairdressers’ professional and personal exposures and compared the frequency of temporary tattoos among hairdressers with the general population [1]. It seems likely that participants who had a temporary tattoo were exposed to paraphenylenediamine (PPD), or derivatives of PPD, as pure henna used in Arabic countries is not used in Denmark. Little is known about personal exposure to hair dye ingredients and temporary black tattoos. Adverse skin reactions to hair dye were reported in 29.5% of hairdressers but no association was found between self-reported adverse skin reactions to hair dye and having had a temporary black tattoo after adjustment for sex, age and atopy. Some 19% of hairdressers (43.5% of apprentices) and 6% of controls reported ever having had a temporary black tattoo. No difference was found in frequency of eczema among temporary tattoos in hairdressers and the general population. Almost all hairdressers (99%) used gloves for colouring, 51% for high/low lighting, 40% for perming and 21% used gloves for shampooing. Skin reactions to hair colour appeared more frequent among hairdressers. Temporary black tattoos were more frequent among hairdressers than in general population controls but were less common with increasing age.

A Swedish study examined health and exposure-responses from metal-working fluid (MWF) aerosols in 2294 employees, 1632 machine workers [2] compared with 662 office workers or metal workers not working with MWFs. Personal exposure measurements to MWF aerosols existed in four of five companies studied. Prevalence ratios with 95% confidence intervals were derived for different health outcomes in relation to the exposure variables. The response rate was 67% resulting in 1048 (923 males, 125 females) workers exposed to MWF aerosols and 451 (374 males, 77 females) referents. Metal workers in Sweden currently exposed to a mean value of MWF aerosols of 0.4 mg/m$^3$ had a significantly higher prevalence of wheeze, chronic bronchitis, chronic rhinitis, and eye irritation compared with referents. At a mean exposure of 0.4 mg/m$^3$ (Swedish 8 h exposure limit value is 1 mg/m$^3$), machine operators showed increased prevalence of symptoms in eyes and airways. The current exposure limit value does not seem to be protective for these workers.

Occupational exposure to anti-neoplastic drugs is a risk for hospital staff. Assessing exposure is important for risk control and a recent Italian study evaluated biological monitoring of 56 oncology nurses exposed to doxorubicin and epirubicin [3]. End-shift urine samples were collected. Amounts of drugs handled were registered. A lower percentage of positive samples were found in one hospital where higher amounts of anthracyclines were handled (3.4 versus 14.8%), suggesting individual incorrect working/cleaning practices in hospital A and overall hygiene standards needed to be improved in hospital B. Effective safety precautions and handling practices to reduce exposure are necessary.

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References

