

## Sensitivity to paraphenylenediamine in Warsaw (Poland)

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From 1 January 2000 to 31 December 2006, in 7125 consecutive patients with dermatitis (5054 women and 2071 men; all Whites), we observed 253 patch test persons positive to paraphenylenediamine (PPD). In comparison with the results of patch testing in London (1), we stated some different trends in Poland, although in last decades, differences in the contact sensitivity between Poland and the countries of Western Europe significantly diminished (2).

Over the past 7 years in Warsaw, there is a decrease in the prevalence of the sensitization to PPD. In all the 7125 persons submitted to patch tests, 3.55% were sensitive to PPD (in 2000: 3.74% and in 2006: 3.39%; the difference was not statistically significant).

In submitted-to-patch test persons, men were significantly more frequently (4.78%; 99 positive of 2071 tested) sensitive to PPD than women (3.05%; 154 positive of 5054 tested). Mean age of men positive to PPD was higher than that of women (49.90 years old versus 43.27 years old). Prevalence of sensitivity to PPD in men was noted mainly in less developed countries (3–5).

Among patients positive to PPD, 16.88% women and 11.11% men were also positive to benzocaine (the difference of which was not statistically significant), and 3.90% women and 37.37% men were also positive to isopropylphenyl-p-phenylenediamine (IPPD) (the difference of which was statistically significant) but no one simultaneously positive to benzocaine and IPPD.

Of the 7125 patients with dermatitis, 110 non-consecutive persons were submitted to patch tests with 1% aniline, and 16 were positive to it. Only 1 woman was positive to aniline and negative to PPD. Among 15 other patients positive to both aniline and PPD, 6 were also sensitive to IPPD, 5 to benzocaine but no one simultaneously positive to aniline, PPD, IPPD, and benzocaine. Many men and women sensitive to PPD do not tolerate some dark textiles and 1 woman – black shoe adhesive (6).

In Poland, popularity of temporary henna tattoos increased only recently. First 2 cases of contact sensitivity to PPD present in paint-on tattoo dyes were described during autumn 2006 (6, 7). During last weeks of 2006, we observed 3 new cases including 2 sisters (13 and 15 years old) who resembled those reported from Westmead, Australia (8). Our patients responded with intense eczematous reaction within 2 days of tattooing but without dissemination of dermatitis and post-inflammation hyperpigmentation. Both were positive to PPD (younger: +++/erythema, vesicles/, older: +/- erythema, infiltration/) and aniline (both +, but only in younger, the patch test reaction was positive also on D7). Only younger was positive to IPPD (++/erythema, papules/).

Sensitization to PPD was occupationally related in 38 hairdressers (35 women and 3 men), of whom 10 women and 1 man were older than 40 years. Occupational dermatitis from PPD was also diagnosed in 3 furriers and in 1 'street artist' who painted temporary tattoos.

The reasons for male prevalence in Poland for sensitization to PPD are not clear. In small portion of patients, it could be connected with cross-reactions to IPPD.

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