

Methylisothiazolinone: the epidemic is declining – but not gone

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Following the reported significant rise in the incidence of contact allergy to the preservative methylisothiazolinone (MI), in 2013 the Scientific Committee on Consumer Safety of the European Commission (SCCS) recommended that MI be banned from use in leave-on products and limited in rinse-off products to 15 ppm (1). At the same time, Cosmetics Europe also recommended a ban of MI from leave on products but did not go as far as to suggest a reduction in rinse off products from 100 ppm (2).

We reported the impact of this advice on patients seen in our patch test clinic from January to December 2014 (3). At this time, despite a reduction in the number of MI-containing leave-on products and increased numbers of rinse-off products containing the preservative, this was not reflected in a decrease of contact allergy to MI.

Methods

We performed a further study of patients attending our patch test clinics from January to December 2015. All 997 patients were tested with the British baseline series including methylchloroisothiazolinone (MCI)/MI 0.02% aq. and MI 0.2% aq., with readings on day (D) 2 and D4, in accordance with ESCD guidelines (4).

From October to December 2015, we asked the MI-sensitized patients to bring in their household and cosmetic products, reviewed product labelling for the presence of MI, and questioned patients about the time of onset of dermatitis to allow us to correlate this with the Cosmetics Europe recommendation to industry in December 2013.

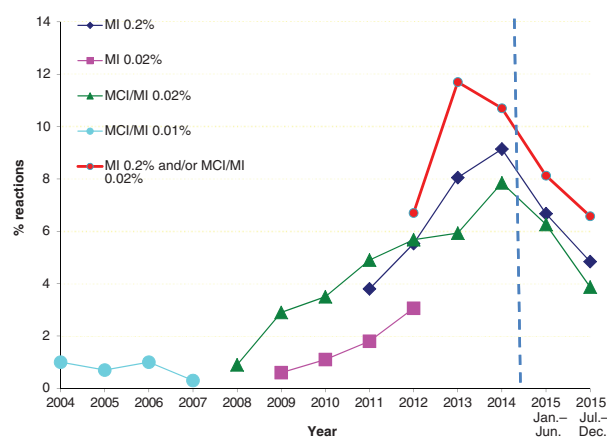


Fig. 1. Incidence of contact allergy to methylchloroisothiazolinone (MCI)/methylisothiazolinone (MI) and MI by year. Our new data are to the right of the blue line.

Results

Our data showed a reduction in the prevalence of contact allergy to either MCI/MI or MI, from 11.7% at its peak (end of 2013) to 6.7% (end of 2015) (Fig. 1). This was mirrored in the data for MI 0.2% aq. (9.1% in 2014 to 4.8% in 2015) and MCI/MI 0.02% aq. (7.9% in 2014 to 3.9% in 2015).

The majority of relevant MI/MCI-containing and MI-containing patient products were rinse-off formulations (23/34), with a smaller number being household products (8/34) and leave-on cosmetic products (3/34). Figure 2 shows the time of onset of contact allergy relative to the release of SCCS and Cosmetics Europe recommendations.

Discussion

It is apparent that the frequency of contact allergy to MCI/MI and MI is decreasing, and that (at the time) non-binding recommendations from both the SCCS (1)

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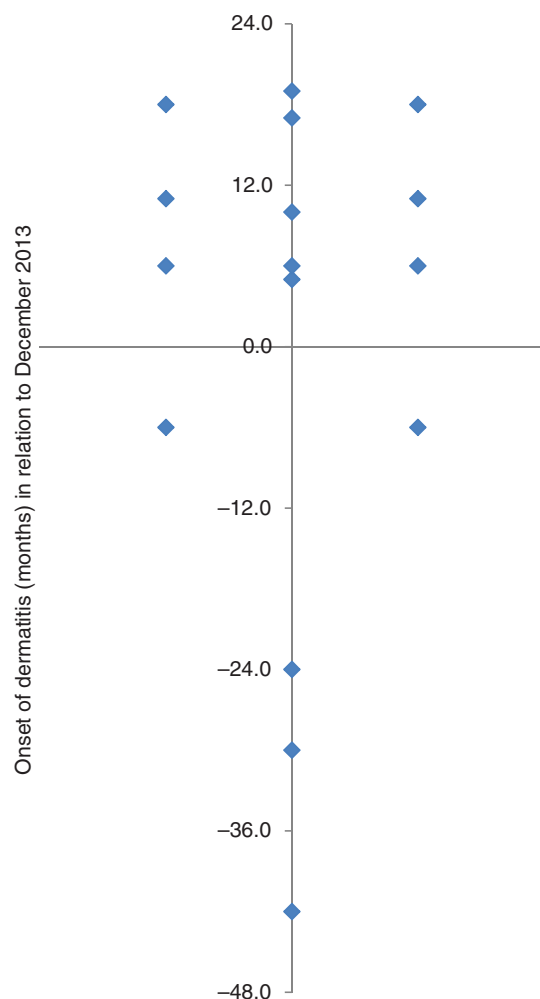


Fig. 2. Onset of dermatitis caused by methylisothiazolinone (MI) in 16 patients allergic to MI presenting in October–December 2015 inclusive. Time 0 is the date of the first issue of current guidance by the Scientific Committee on Consumer Safety of the European Commission and Cosmetics Europe.

and Cosmetics Europe (2) have had an effect. However, patients continue to become sensitized despite guidance issued to prevent sensitization nearly 2 years later. Four of 16 patients seen during October–December 2015 developed dermatitis, and presumably became sensitized in the preceding 6 months. Although there has been a progressive change in the type of product containing MI, with a shift towards rinse-off products and a progressive fall in leave-on products and wipes as compared with previous data (3), this has been insufficient to prevent new cases.

The final opinion of the SCCS on MI published in December 2015 (5) emphasizes that it considers a level of 15 ppm in rinse-off products to be safe, and not the 100 ppm recommended by cosmetic industry. Furthermore, it has been shown that levels of 50 ppm and above are sufficient to elicit a reaction from rinse-off products in sensitized individuals (6). Legislation is required to mandate a lower level in rinse-off products, given the difference in opinion and persisting sensitization. A ban on the use of MI in leave-on products also needs to be implemented.

It is notable that more patients are bringing in domestic household products containing MI, and that these may also provide a source of sensitization when, for example, dishwashing liquids are used without gloves. Analysis of consumer products suggests that detergents contain high levels of MI and that labelling may be inaccurate (7).

In conclusion, our data appear to be the first to show an effect of the 2013 SCCS and Cosmetics Europe recommendations in reducing the rate of allergic contact dermatitis caused by MI. However, this has been insufficient to prevent the induction of sensitization, and legislation to further limit exposure and accurately define the contents of products appears to be required.

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