



Figure 1. (a) Physical examination showed an alopecia area involving the temporal, eyebrows and eyelashes. (b) Nail changes were thinning, ridging and brittleness of the nail plate. (c) Physical examination revealed bald areas involving occipital hairlines in a continuous band.

Alopecia areata is a genetically determined, immune-mediated disorder of the hair follicle resulting in a non-scarring hair loss. It is uncertain whether alopecia in this patient is just a coincidence or whether there is an unknown genotype-

phenotype correlation. However, recently, rapid progress in molecular genetics has led to the identification of many candidate genes that are linked to AA. Though the expression of AP-CDD1 gene on chromosome 18 which underlies autosomal dominant congenital hypotrichosis⁴ might be affected in our case, we made a diagnosis of AA on the basis of clinical examination. Otherwise, Amalia Martinez-Mir et al. revealed chromosome 18 has one of the most susceptible loci for AA.⁵ As mentioned before, the phenotype associated with r(18) syndrome depends on the size of the deleted lesions. Because a gene on chromosome 18 linked to AA which locates close to centromere⁵ is hard to delete, alopecia symptoms may be very rare in r(18) syndrome. Though this case supports Amalia Martinez-Mir's results, only a deletion of genes on chromosome 18 is not critical in AA pathogenesis and further dermatological examination seems crucial for r(18) syndrome.

CONFLICTS OF INTEREST: None.

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Severe contact urticarial syndrome due to oxidative hair dye containing para-aminophenol and sodium-methyl-oleoyl-taurate

Dear Editor,

It is well known that oxidative hair dye can cause delayed hypersensitivity. However, contact urticaria due to hair dyes has been rarely reported. We herein report a case of severe contact urticarial syndrome (CUS), which developed into ana-

phylactic shock, due to oxidative hair dye containing para-aminophenol and sodium-methyl-oleoyl-taurate.

A 52-year-old woman was referred to our hospital because she experienced anaphylactic shock during the coloring of her hair at a hair salon. Since 2010, her head has always felt itchy

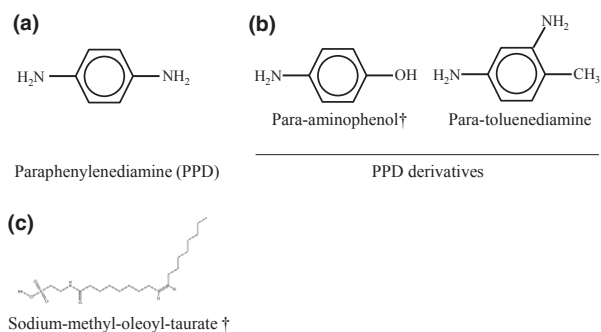


Figure 1. The chemical constitution formulae of paraphenylenediamine (PPD) (a), PPD derivatives (b) and sodium-methyl-oleoyl-taurate (c). †The causative components in the present case.

when her hair had been colored in the hair salon. However, in February 2012, she developed pruritus of the scalp immediately after the oxidative hair dye was applied to her head at the same salon; this was followed by flushing over her entire body, with dyspnea, vomiting and hypotension. She was transferred to a hospital and administered i.v. steroid and hydration.

To examine for immunoglobulin E-mediated allergy due to the oxidative hair dye, skin prick testing (SPT) was performed with the oxidative hair dye and its ingredients. First, the result of the SPT with the oxidative hair dye (10% of the concentration applied on hair), which was a mixture of the first agent and the second agent, was positive. Then, the result of the SPT was positive with the first agent (1% of the concentration applied on the hair). Furthermore, when the SPT was performed separately on all 14 ingredients of the first agent, the results were positive for para-aminophenol (4.6 mm × 4.0 mm wheal) and sodium-methyl-oleoyl-taurate (5.5 mm × 4.2 mm wheal). Therefore, the subject was diagnosed with CUS due to para-aminophenol and sodium-methyl-oleoyl-taurate. The results of the SPT were negative for the first agent, para-aminophenol and sodium-methyl-oleoyl-taurate in three healthy controls.

In 1981, Von Krogh and Maibach proposed that CUS should be classified into four stages according to severity.¹ Stage 1 involves localized contact urticaria and symptoms such as itching or burning sensation. Stage 2 refers to the development of gener-

alized urticaria. Stage 3 may include bronchial asthma, rhinoconjunctivitis or gastrointestinal dysfunctions. Finally, in stage 4, anaphylactic or anaphylactoid reactions may occur as the most severe type of CUS manifestation. Thirteen cases with contact urticaria due to hair dye have been reported from 1946 to 2013 in PubMed. Among 11 cases, whose staging was described, seven cases (63.6%), two cases (18.2%) and two cases (18.2%) were classified into stage 4, stage 3 and stage 2, respectively, indicating that CUS due to oxidative hair dye tends to be relatively severe. Moreover, the frequent causative compound was paraphenylenediamine (PPD) and its derivatives (7/13, 53.8%)²⁻⁴ followed by henna (3/13, 23.1%).⁵ The causative compounds of the present patient were para-aminophenol, a PPD derivative (Fig. 1b), and sodium-methyl-oleoyl-taurate (Fig. 1c), a surface-active agent. The present case is, to our knowledge, the first case of CUS due to sodium-methyl-oleoyl-taurate.

This report indicates that we should be aware that oxidative hair dyes may also be a cause of anaphylaxis, even after long-term safe use.

CONFLICT OF INTEREST: None.

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Transient prominent elevation of circulating thymus and activation-regulated chemokine/CCL17 after food-induced anaphylaxis

Dear Editor,

Thymus and activation-regulated chemokine (TARC)/CCL17 is a chemokine that binds to CCR4 and is a sensitive marker for

severity over the course of T-helper 2-dominant inflammatory skin diseases, such as atopic dermatitis.^{1,2} We experienced a case in which the serum level of TARC was transiently elevated

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