

Correspondence

Aminoazobenzene in tattoo: another case of allergic contact dermatitis

Editor,

The practice of tattoo art, nowadays, is common among men and women of every age.¹ In the US, it is estimated that 45 million adults have at least one tattoo. In Italy, also, this phenomenon includes 7 millions of people, and it is more common in women than in men. The social meaning of tattoo art has changed over the centuries. The spread of this phenomenon, especially among adolescents, needs urgent action for health monitorization and promotion of self-protection among young people.^{2,3} If not supervised, these practices may cause both local and systemic complications.^{4,5} Psoriasis, systemic AQ2 lupus erythematosus (SLE), sarcoidosis,⁶ and lichen planus can be found in the area of the tattoo, probably because of a minor locus resistance or the isomorphism of Koebner.⁷

We introduce a clinical case of a 28-year-old woman who presented to our Dermatology Clinic after 1 month of itching, erythema, and heat in the area of a colored tattoo on her left leg (Fig. 1).

We performed the patch test series SIDAPA, produced by F.I.R.M.A. S.p.A (Firenze, Italy), which involved applying patches containing the following haptens on the back of the patient: potassium dichromate, rosin, epoxy resin, formaldehyde resin, Euxil 400, neomycin sulfate, fragrance mix, nickel sulfate, mercaptobenzothiazole, paraphenylenediamine, cobalt chloride, balsam of Peru, thiuram mix, benzocaine, lanolin, alcohols, parabens, Vaseline, scattered yellow, scattered blue, and hydroquinone with negative results.

We then proceeded with special series F.I.R.M.A. for tattoo (copper sulfate 1% water, dimetilaminoazobenzene-p1%, aminoazotoluene-o 1%, blue scattered 3 1%, blue scattered 124 1%, yellow scattered 3 1%, orange scattered 3 1%, red scattered 1 1%, gentian violet 2%, cadmium chloride 1% in water, nickel sulfate 5%, iron chloride 2% in water, potassium dichromate 0.5%, chromium trichloride 2%, aminoazobenzene-p 0.25%, cobalt chloride 1%, aluminum chloride 2%, titanium dioxide 0.1%, zinc 2.5%, mercury chloride 0.05% in water, kathon cg 0.01% in water, phenol 0.5%, ethylenediamine hydrochloride 1%, phenylenediamine base-p 1%, formaldehyde 1% in water, phthalic anhydride 1%, rosin 20%, dibutyl phthalate 5%, hexamethylenetetramine 1%, benzophenone 5%).

The result was positive for aminoazobenzene-p 0.25% (+) after 48 hours and (++) after 72 hours.

Azo-pigments are commonly used for tattooing because of their color intensity and longevity. Aminoazobenzene was present in the orange pigment.



Figure 1 Tattoo on the leg showing an erythematous halo. This area was intensely pruriginous

We proposed to our patient to remove the tattoo with laser therapy, but she refused. We proceeded with topical application of steroid for 1 month, and cutaneous manifestation was resolved.

We described this case to cite evidence of skin reactions after exposure of pigments in tattoos to alert people particularly between 16 and 25 years old about tattoo pigments causing allergic contact dermatitis and potentially severe systemic complications. People desiring to get tattoos should also be made aware that as complications from tattooing are being increasingly recognized, requests for laser tattoo removal have also risen.¹ Patch test and special series F.I.R.M.A. for tattoo can reveal allergic contact dermatitis potential in individuals. Therefore, our study suggests all people who want to get tattoos to perform a patch test before getting them.⁸⁻¹⁰ Finally, we urge for development of more tattoo haptens for patch tests in order to make this procedure as effective as possible.

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