

O35. ALLERGIC REACTIONS TO RED PIGMENT TATTOOS AND TREATMENT METHODS

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Aim: To present different clinical and histologic presentations of cutaneous allergic reactions to red pigment tattoos and therapeutical options.

Methods: Observational retrospective study of allergic reactions to red pigment tattoos and treatment options as diagnosed in the academic hospitals in Amsterdam / Academic Tattoo Clinic Amsterdam. All patients who were treated by the author(s) were included. In addition, we retrospectively searched the electronic medical records of the dermatology departments of the academic hospitals in Amsterdam.

Results: In total 39 patients were included. More than half of the patients developed the reaction on the lower extremities. Symptoms mainly developed within the first 3 months after placing the tattoo, nevertheless 46% of patients developed symptoms in a period of 3 months up to 7 years after tattooing. In majority of the cases the clinical presentation was an elevated plaque in the red part of the tattoo. Other, more rare, clinical presentations included ulcero-necrotic and excessive hyperkeratotic lesions. Despite similar clinical presentation, several histopathological patterns were observed: lichenoid, pseudolymphomatous, granulomatous or a combined inflammation. Approximately one third of patients reported worsening of symptoms during tattoo exposure to sunlight and approximately two third had a history related to atopic constitution (allergic asthma, atopic dermatitis or allergic rhinitis). Furthermore, in half of the patients we observed a delay of 6 months or more between the onset of symptoms and a visit to the clinic.

Generally, first line treatment consisted of local or intralesional corticosteroids. Patients with persistent complaints were successfully treated with carbon dioxide (CO₂) laser. In exceptional cases systemic minocycline, cyclosporine or hydroxychloroquine were used.

Conclusion: A great variety in clinical appearance and histopathological patterns is observed in red pigment tattoo reactions. Further research is needed to analyse if a specific histological pattern correlates with treatment outcome. Treatment requires an individual approach taking into account tattoo location and size, patients preference and potential side effects. Therapeutical options include local corticosteroid, laser therapy, surgery, dermatome shaving, allopurinol, cyclosporine and hydroxychloroquine.