Melanoma on a tattoo

Un mélanome sur un tatouage ancien

Case report

A 50-year-old Finnish male presented for a pigmented lesion that developed on the upper part of an old tattoo of the left arm. His past medical history was unremarkable except that he had been previously operated for a basal-cell carcinoma of left shoulder. There was no history of skin cancer or melanoma in the family. Upon examination, he had a heterogenous multicolored and asymmetric pigmented lesion, highly evocative of a melanoma (figure 1). The tattoo nearby had been performed in the 1950s. He reported no history of trauma or irritation to the area. However, the patient was not able to say when the lesion first appears or if there was a preexisting naevus before tattooing.

Using the two-step method [1], dermoscopy disclosed a melanocytic lesion based on the presence of a pigment network (brownish interconnected lines overlying background of tan diffuse pigmentation and the lack of any criteria for a non-melanocytic lesion) (figure 2). The overall lesion is asymmetric with at least two different colors, brown and dark brown. The pigment network is atypical with thick lines, irregular brown streaks are noted on the periphery of the lesion and regression structures in the center (white scar like depigmentation). Tattoo pigments are noted on the periphery of the lesion as dark blue pigmentation. Overall, the dermoscopic features were evocative of a possible melanoma prompting full excision of the lesion. Microscopic analysis confirmed a diagnosis of melanoma in situ.

Discussion

We report here an additional case of melanoma that developed in the vicinity of a permanent tattoo. So far, approximately 20 melanomas have been reported in the literature [1–5]. Overall cutaneous malignancies (melanoma and non-melanocytic skin cancers) arising in tattoos have been reported for the past 40 years in the literature. A potential causative link has been widely debated ever since [1]. The role of the trauma induced by the procedure, the potential carcinogenic components contained in tattoo inks and introduced during tattooing or the by-products that appear as a result of the local metabolism of these very same tattoo pigments, the role of chronic UV exposure on tattooed skin, and a possible genetic predisposition background are also possible explanations [1]. However, as we stressed so far, the number of cases of melanoma remain exceedingly low when compared to the number of tattooed individuals in the population.

In Finland, like in France, the incidence of melanoma is rising increasing [6,7]. As the popularity of tattoo increase, the risk that a coincidental melanoma develops on a tattoo increases. Besides, as illustrated by a recent report [3], tattoos make more difficult the detection and the surveillance of pigmented lesions, which develops in a tattoo. The typical features that make a pigmented lesion a suspicious ugly duckling are hindered by the colored tattoo. To date, there are been no case of “double” melanoma on a single tattoo that would make more plausible a real risk between tattooing and melanoma. In our case, the melanoma developed in a 50–60-year-old tattoo. Besides, the patient had a past history of basal-cell carcinoma as well as 2nd lesion in the back, which illustrated his past history of sun damage and chronic sun exposure. Our case is another illustrative case of coincidental melanoma on a tattoo. However, this case should be a reminder that pigmented melanocytic lesions may arise in tattoos that they are more difficult to diagnose and follow on dark tattoos. Heightened vigilance and careful inspection of tattooed skin are warranted to ensure early detection and removal. Patients should
undergo regular skin examinations to monitor pigmented lesions that can arise in tattoos.

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References


