

## “A Strange Flower in the Garden”: The Importance of the Dermatoscope in the Assessment of Tattoos

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### Case Presentation

A 49-year-old healthy female presented with a 12-months history of an asymptomatic red and crusty lesion on her left arm, next to a tattoo inoculated 6 years before. Cutaneous examination showed a red plaque with yellow crust and erosions, next to the black and red tattoo (Figure 1A). Under the diagnostic suspicion of infectious impetigo vs. reactive dermatosis to tattoo ink, treatment with topical corticosteroids and antibiotics was prescribed, showing only partial improvement and persistence of the plaque at the two-month follow-up (Figure 1B). This time, the use of dermoscopy revealed small erosions, arborizing telangiectasias (white arrows) and concentric structures (green arrows) (Figure 1C), suggesting the diagnosis of superficial basal cell carcinoma associated to tattoo, what was later confirmed by a skin biopsy.

### Teaching Point

Decorative tattooing involves the introduction of exogenous pigments into the dermis. Complications include primarily infections, allergy to tattoo pigments, the localization of various dermatoses to tattoos, but also benign and sometimes malignant tumors arising on them [1,2], such as melanoma or basal cell carcinoma. The occurrence of cutaneous malignancies in tattoos may be related to the “scarring process” and local chronic inflammation, and the presence of carcinogenic substances in tattoo ink. However, a directly causative relationship cannot yet be confirmed [1,2].

Although pigment allergy is the most common tattoo complication, especially when red ink is used [1], we claim the importance of using dermoscopy in the assessment of any lesion in a tattoo, as malignant tumors may also arise on them. In addition, it can also facilitate the diagnosis of



**Figure 1.** (A) Cutaneous examination showed a red plaque with yellow crust and erosions, next to one of the tattoo red flower and black branch (tattoo of a tree in bloom with black and red colors). (B) Persistence of a red plaque, although with less crust and erosions. (C) Examination of the red plaque with dermoscopy revealed the presence of small erosions (black arrows), arborizing telangiectasias (white arrows) and concentric structures (green arrows).

tattoo infectious complications like viral warts, molluscum contagiosum or demodicosis, and, consequently, reduce the number of unnecessary biopsies [3].

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