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INTERESTING MEDICAL IMAGE

Dragon Warts

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ثآليل التنين

لورا لينياريس غونزاليس، فرانسيسكو نافارو تريفينيو، ريكاردو رويز فيلافيردي

Figure 1: Skin-coloured papules on a black tattoo of the abdomen of a 31-year-old male patient who presented to the dermatological outpatient clinic in Hospital Universitario San Cecilio, Granada, Spain.

A 31-year-old male patient with a personal history of type-1 diabetes presented to the dermatological outpatient clinic in Hospital Universitario San Cecilio, Granada, Spain in January 2020, with asymptomatic, multiple, skin-colored papules of different sizes within a black tattoo on his abdomen [Figure 1]. The tattoo was done 15 years ago and the lesions developed one year after on the lines of the tattoo and remained exclusively confined to it. However, the patient did not seek medical attention for the papules on his tattoo. Dermatoscopy showed skin-coloured homogeneous papilomatous papules; laboratory investigations were within normal limits [Figure 2]. Complimentary tests such as blood cell count test, general biochemistry, autoantibodies, angiotensin converting enzyme, erythrocyte sedimentation rate, C-reactive protein complement, immunoglobulins, urinalysis were within normal limits. The histological findings were consistent with *verruca vulgaris*. Patient consent was obtained for publication of the images.

Comment

As tattooing has spread worldwide, the number of medical consultations regarding its side effects has increased. Although the most common reactions to tattoos are inflammatory reactions, a variety of infectious diseases including bacterial and viral infections has also been described.[1]

The first formal report of in a tattoo dates back to 1884.[2] Most reports seem to be confined to certain colours used multicoloured tattoos, with a clear preference for black ink.[3] In the current case, the distribution of warts over the black ink along with the

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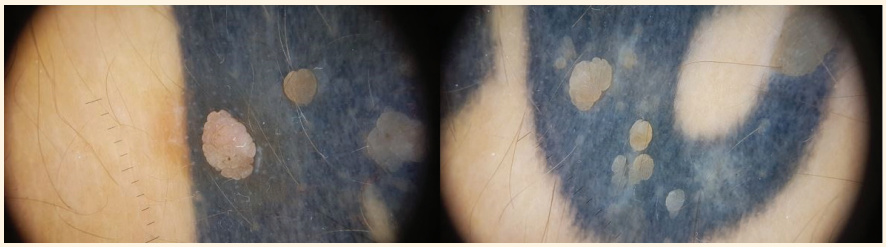

Figure 2: Dermatoscopy at x10 magnification showing skin-coloured homogeneous papilomatous papules on the black tattoo of a 31-year-old male patient.

surrounding normal skin raised suspicion regarding the localisation of the warts.

In the current case, the source of infection was difficult to determine. However, it has been proposed that it was the result of contaminated ink or other contaminated materials or instruments, implantation of viral particles present in the saliva of the tattoo artist during the procedure or autoinoculation of the patient's own wart by tattooing through virally contaminated skin.[4] Another possibility is that the infection was already present before tattooing. An interesting theory suggests that virus replication might have been activated by mechanical impairment of the skin barrier. In most cases, lesions could be observed several months or years after tattooing.[5]

The longest latency period between tattooing and the manifestations of human papillomavirus (HPV) infection was 10 years. This suggests that the immune system is able to control the infection and that the development of cutaneous viral warts could depend on a local persistent dysregulation of the skin immune system. In addition, delayed activation of HPV and induction of warts in a tattoo has also been described after sunlight exposure implying that HPV can be triggered by external stressors.[5] Another explanation to this phenomena is that the tattooed area becomes an immunocompromised district. An immunocompromised district is a site which is particularly susceptible to subsequent outbreaks of opportunistic infections, tumours and immune disorders confined to the district itself.[6,7]

A simple physical examination will easily suggest the correct diagnosis in most cases. However, dermatoscopy is a useful adjuntive tool when clinical diagnosis is not clear or if histological images are inconclusive or not available.

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