



Clinical Case

Provocation of Pigment (Melanocytic) Nevus Occurrence by Tattoo Procedure

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Abstract

Clinical case of occurrence of dark skin neoplasm, elevated above the surface of the skin, provoked by tattooing, is presented. The patient complained on dryness, itch, and tightness in the area of tattoo in eyebrow. Status localis: pigmented oval, verrucous near tattoo skin neoplasm, dry skin. Histological findings included multiple nevus cells, «nest» of melanocytes in epidermis. Pigmented melanocytic nevus was diagnosed and interpreted as complication of tattoo. The nevus was excised.

Key words: Tattoo; Pigment granules; Nevus; Complication of tattoo

Introduction

Nowadays it is found that tattooing in some cases is accompanied by the development of adverse reactions, we previously proposed the classification of post-tattoo complications [1]. Complications that occurred after tattooing are characterized by expressed polymorphism that is caused by direct skin traumatization and toxic effects of coloring pigment, as well as delayed effects associated with accumulation of tattoo pigment in skin. One of the most formidable complications is the development of neoplasms in the area of tattoo, however, the information available in the literature on this problem is limited and ambiguous [2,3], that determines the actuality of this clinical case.

Aim: demonstration of clinical case of nevus provocation after tattoo.

Study design. Patient, 21 years old, applied to the center with complains on occurrence of dark lesion after eyebrow tattoo in the area of injection of black tattoo pigment dry of the skin, itch, feeling of tightness. During the clinical examination status localis: pigmented oval, verrucous near tattoo skin neoplasm, dry skin. During palpation the neoplasm is painless, solid-elastic texture, mobile, not soldered with surrounding tissue. (Figure 1). Surgical treatment was performed: nevis excision (Figure 2).



Figure 1: Eyebrow tattoo: change of outside view of tattoo, neoplasm in the area of black pigment injection.



Figure 2: The patient after the operation of nevus excision.

Histological finding included multiple nevus cells, accumulation of melanocytes in epidermis at the ends of epidermal outgrowths, migrating into dermis. Large cuboid nevus cells with a high content of cytoplasm and the presence of pigment were determined. Tattoo pigment was located diffusely and in the form of focal accumulations in the papillary dermis. Mitoses and cellular atypia were not detected. (Figure 3).

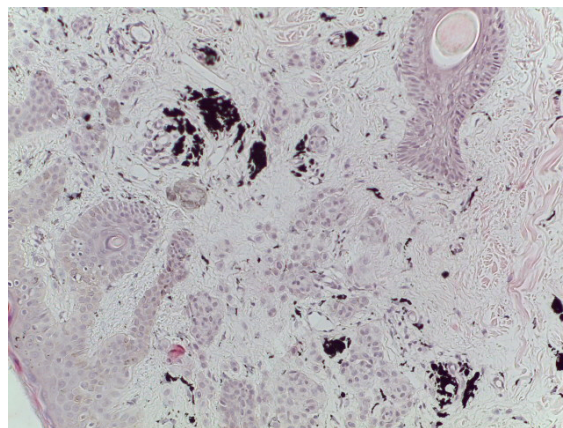


Figure 3: Skin fragment with nevus cells with large nuclei, «nests» of melanocytes in the epidermis, accumulations of tattoo pigment granules in papillary dermis were determined. Hematoxylin and eosin stain. 200 Magnification.

After the histological examination of the material, the final clinical diagnosis was Melanoform nevus of the face D22.3

Conclusion. For a long time it was believed that nevi and tattoos can be combined, but these coincidences are nothing more than an accident. Nowadays an alternative opinion has appeared, according to which a tattoo, or tattoo pigment is provoking factor in occurrence of nevi [4].

Searching and determining cause-and-effect relationships of tattoos and nevus, it is necessary to distinguish between: a nevus that arose after a tattoo, in this case the nevus should be considered tattoo-associated, and a tattoo against the background of an existing nevus, in this case all post-tattoo changes resulting from this are secondary.

The high incidence of post-tattoo complications in the form of tumor and tumor-like processes makes it possible to draw a conclusion about the potential risks of tattoos and dictates the need for further comprehensive study of this problem.

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