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### RESEARCH ARTICLE

#### WHAT TO EXPECT FROM MICROBLADING OF THE EYEBROWS

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#### Abstract

Microblading of the eyebrows, a kind of cosmetic tattooing that has become very popular in the last decade, it can nevertheless cause adverse skin reactions at the tattoo site, including infections, allergic reactions, and even sarcoid reactions. These reactions can lead to a reduction in the quality of life. We report two cases of adverse reactions following microblading of the eyebrows, the first patient 40-year-old woman presenting with a 7-month history of erythematous lesions on the eyebrow. A biopsy was performed, which came back a sarcoidosis granulomatous reaction. Our patient was put on intralesional corticosteroid and synthetic antimalarials with good improvement, the second patient 38-year-old woman consulting for erythematous, oozing, pruritic lesions after 3 days of application microblading of the eyebrows. The dermatological examination revealed the presence of edematous erythematous plaques surmounted by vesicles with crumbling contours located on both eyebrows. The diagnosis of contact eczema was retained, and the patient was put on a low-class topical corticosteroid for 10 days with good improvement.

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#### Introduction:-

Permanent eyebrow makeup is a kind of cosmetic tattooing, an invasive procedure that has become very popular in the last decade, not only for aesthetic applications, but also in dermatological cases like total alopecia, hypothyroidism or chemotherapy-induced madarosis<sup>2</sup>. However, although it is a safe procedure, it can cause adverse skin reactions at the tattoo site, including infections, allergic reactions, and even sarcoid reactions. These reactions can lead to a reduction in quality of life.

#### Materials and Methods:-

We report on two cases of different effects of the microblading of the eyebrows. The patients were examined with the DermLite 4 Dermoscopy. The diagnosis was confirmed by histology in one patient.

#### Observations 1:

40-year-old woman with no history of pathology. The patient consulted for erythematous lesions on the eyebrows, which had been progressing for 7 months. The patient reported that she had applied the Microblading of the eyebrow's product several times. The interval between the last application of the Microblading and the onset of the symptoms was 1 year.

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Dermatological examination revealed multiple confluent erythematous papules in a linear pattern. They were in the eyebrows at the site of microblading. Dermoscopy examination revealed a yellow-orange appearance to the vitreous pressure and irregularly scattered color areas between the grey-brown areas of the tattoo(FigA). A punch biopsy was performed, Anatomopathological examination showed sarcoidal granulomas throughout the dermis with multinucleated giant cells. There was stippling of exogenous pigment throughout, which was more prominent within superficial macrophages. sarcoidosis work up was relisted Biological a test came back without abnormality and imagery thoracic: scan objectified stage II pulmonary sarcoidosis.

Our patient was put on intralesional corticosteroid and synthetic antimalarials with good improvement. At one-Two follow-up, there were still no signs of recurrence.(Fig B)



Fig A : Dermoscopy : yellow-orange appearance , irregular color (a), multiple confluent erythematous papules in a linear pattern. (b)

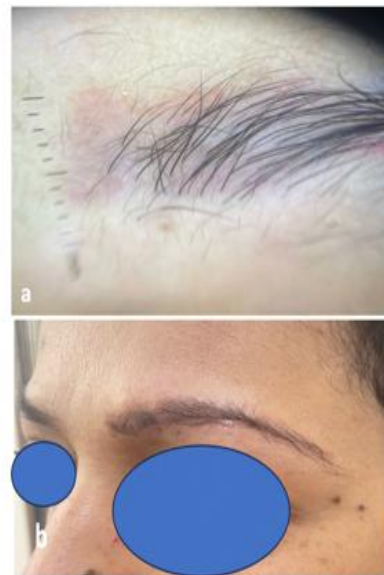


Fig B: Two yers after therapy disappearance of lesions (a and b)

**Observation:-**

A 38-year-old woman consulted for erythematous, weeping, and pruritic lesions after microblading of the eyebrows, reporting similar reactions after tattooing. Dermatological examination revealed oedematose erythematous plaques with crumbling vesicles on both eyebrows (Fig C). Diagnosed as contact eczema secondary to the microblading or the products used during the procedure, the patient was treated with low-grade topical steroids for 10 days with good improvement.(Fig D)



Fig C : Oedematose erythematous plaques with crumbling vesicles on both eyebrows

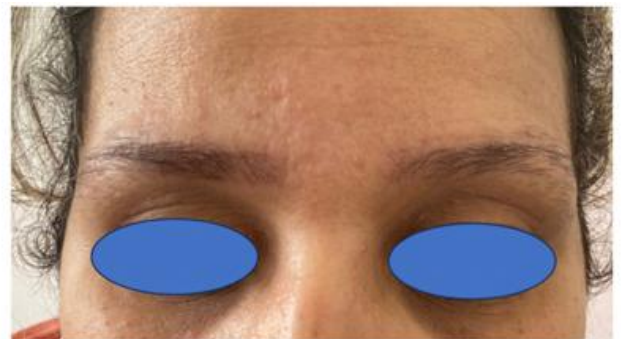


Fig D : 10 days following treatment

**Discussion:-**

Microblading is a novel method of semi-permanent makeup, which has achieved popularity in the last few years. Facial pigmentation techniques for aesthetic purposes have become common. Among them is eyebrow tattooing or Microblading.

Microblading is normally performed with a tattoo pen. It is performed by introducing exogenous dyes and metallic pigments into the epidermis, approximately 0.1 to 0.2 mm below the dermis. The aim is to create lines that imitate hairs, giving eyebrows a natural, (1) Ready-made paints are available on the market, but some professionals make their own mixtures. Pigment introducing dyes into the dermis using micro needles then the remaining pigment particles are stored in dermal macrophages and fibroblasts, this can lead to a local inflammation and formation of granulomas, most frequently sarcoidosis granulomas. ( 3-5)

Sarcoid granulomas may develop in areas of tattooing or permanent makeup as isolated reactions or as part of systemic sarcoidosis. This may possibly be due to an immune response to ongoing exposure to foreign materials in the skin, The time between tattooing and the onset of the reaction is variable and there may be a long latency period, from 4 months to 25 years.

The risk of the development of systemic sarcoidosis after microblading, (35) which is correlated with the multiplication of this procedure, the therapies used in cases reported in the literature, according to the severity of the reactions: injection of triamcinolone, tacrolimus 0.1% ointment for the local reaction and corticosteroid systemic for the systemic reaction. (4) .

Microblading Allergic Reaction, as with any cosmetic procedure, microblading involves various tools and fluids coming into contact with the skin. An allergic reaction to microblading may be caused by one or more of the following: pigment ingredients, anesthetics, aftercare products, metal microblading blades, any other product applied to the microblade area after the treatment.

Delayed reactions can vary from a few days to several weeks after microblading. People with metal allergies are more likely to react to the microblading pigments or the blades themselves. Nickel allergy can be triggered by exposure to iron oxide and titanium oxide, which are found in some pigments. Tetracaine and benzocaine are anesthetics commonly used in tattooing creams. They belong to a group of chemical compounds called esters, which are common allergens. A person can have an allergic reaction to microblading anesthetic creams even if they have not previously reacted to other anesthetics; the treatment of allergic reactions is based on topical corticosteroid, explanation and making the patient aware of the risk of recurrence if they do it again, so it is an act to be avoided.

**Conclusion:-**

The side effects of microblading remain diverse ranging from contact dermatitis to granulomatous reactions. Hence, an early diagnosis and an adapted management allows to avoid the inflammatory and granulomatous forms. dermatologists should be aware of popular and novel cosmetic procedures and the potential complications that arise from these interventions to facilitate appropriate management.

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