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Treatment of Penile Melanosis with Timedsurgical Mixed Peeling 0.5: Case Report

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Abstract

We developed the 0.5 mixed peeling technique to remove facial and body blemishes and it has now been used to treat penile melanosis. Mixed peels include three standardized physicochemical techniques using specific diathermic currents and resorcinol. Resorcinol in aqueous solution is effective only on de-epithelialized, microperforated or permeabilized skin, not intact skin.

Timedsurgical de-epitelialization is used for extensive and deep hyperpigmentation, depigments normal pigmented skin in two treatments and eliminates lip wrinkles, roughness and festoons of the lower eyelids in a single treatment. Micro perforation or Electroporo Cosmesis is used for extensive superficial pigmentations, melasma, erythrosis and roughness of the face and body. The 0.5 mixed peel with permeabilization treats individual blemishes that lighten while decreasing the number of melanocytes without the risk of permanent hypopigmentation.

Keywords: Penile melanosis treatment; Mixes peeling 0.5; Penile lentiginosis; Genital melanotic macules; Resorcinol; Timedsurgery; Diathermic currents

Introduction

Penile melanosis appears as small dark patches on the penis, resulting from melanin deposits in the epidermis and superficial dermis. The condition can arise from various factors, including genetic predisposetion, hormonal changes and skin inflammation.

Although penile melanosis is benign, men seek treatment for aesthetic, psychological or relationship reasons.

Treatments for removing pigmented spots in the penis include laser therapy, which has unpredictable results and damage underlying tissues; surgical procedures, which take longer to heal and leave scars; cryotherapy and laser are not the first-line treatment options due to renewed posttreatment hyperpigmentation [1,2]. Cryotherapy, therefore, requires numerous applications [3]. All these therapies are not amazingly effective and act beyond the area to be treated, causing unnecessary deep lesions in the tissue.

Topical treatments such as hydroquinone, retinoids and azelaic acid require numerous applications to show visible effects [4]. They do not effectively prevent recurrence and can cause rebound hyperpigmentation. Products such as hydroquinone and alpha arbutin work by reducing the production of melanin. Melanogenesis inhibition can be preventative but is certainly not the solution for overt hyperpigmentation. Melanogenesis inhibitors are effective if they are applied. Prolonged application or a break can cause more evident reactive hyperpigmentation [5]. These products are difficult to apply precisely to the spots.

For this reason, we have created three standardized physical-chemical techniques that use specific diathermic currents and resorcinol. Resorcinol in aqueous solution does not act on intact skin but is effective on de-epithelialized [6-8], micro-perforated [9]. or permeabilized skin to remove spots: mixed peeling 0.5 [10]. This technique does not usually require anaesthesia and acts exclusively on the most superficial layer of the skin, decreasing the number of melanocytes. Therefore, the secret to eliminating all pigmentation is to act on melanocytes directly. Timedsurgery (technique for the implementation of measured electrosurgical data) was born from the clinical needs of different applications and is based on perfectly repeatable real values. The almost equal electrical conductivity in patients allows the use of precise programming data.

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Case Presentation

A 45-year-old male presented with multiple dark pigmented spots on the penile shaft, persisting for over five years. The patient reported no discomfort or pain but expressed a desire for treatment due to aesthetic concerns and psychological distress **(Figure 1)**.

Figure 1: Penile melanosis.

Materials and Methods

Timedsurgical Mixed peels are called this because they combine both physical and chemical methods. In this case, the mixed peel is called 0.5 because the emission lasts half a hundredth of a second. This specific standardized diathermic current is applied to make the epidermis permeable.

Following this, a saturated water solution of resorcinol is applied to the permeabilized epidermis for 3-5 minutes until a frosty appearance occurs. Afterwards, the resorcinol is washed off. Mixed peeling 0.5 does not cause hypopigmentation and effectively reduces the number of melanocytes in the skin. This reduction helps ensure that the hyperpigmented areas treated do not recur.

Standardized treatment procedure

The treatment procedure is standardized, with precise programming data of the Timed apparatus (Korpo). The Timed apparatus [11] results from many years of research to resolve surgical and dermatological problems rationally. The programming data of the epidermal permeabilization are DIRECT PULSED-Coag-38 Watt-0.5 hundredths of a second-EM15. The pulsating emissions of half a hundredth of a second are almost painless and do not require anaesthesia. During the treatment, the operator uses the tip of the EM15 electromaniple (1.5 mm diameter) to touch the affected spots repeatedly. The permeabilized epidermis remains in place and is not removed **(Figure 2)**. It will contribute to the formation of the crust.

Figure 2: Epidermal permeabilization. Program data: Direct pulsed-0.5 hundredths of a second-coag-38 watt- EM15 (1.5 mm diameter).

Epidermal permeabilization

The epidermal permeabilization process is performed on the entire surface of the spot and extends about a millimeter around it. Once the physical part of the treatment, which facilitates access to the dermis, is complete **Figure 3**, the pre-prepared saturated resorcinol solution is applied. This solution is made by mixing a small quantity of resorcinol powder with water until no more powder can dissolve and some remains at the bottom of the cup, indicating saturation **(Figure 4)**.

Figure 3: The electromaniple touches the affected spots repeatedly. The pulsating emissions of half a hundredth of a second are almost painless and do not require anaesthesia.

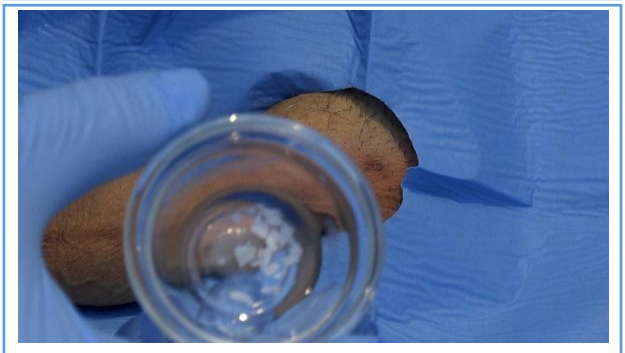

Figure 4: The epidermic permeabilization process is performed on the entire surface of the spot and extends about a millimeter around it. The saturated resorcinol solution is ready to be applied.

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Application of resorcinol solution

The saturated resorcinol solution is applied with a cotton swab to the spots' permeabilized epidermis **(Figure 5)** until a uniform frost is obtained **(Figure 6)**. The applied resorcinol must not dry. The application time of the saturated resorcinol solution varies from just over 2 minutes, as in this patient, up to 5 minutes in other regions of the body. After a few hours, a crust forms, which should come off spontaneously. No substances should be applied to the treated areas. Once the crust has come off, a slightly red area remains. The patient can apply products based on zinc oxide.

Figure 5: Resorcinol solution is applied with a cotton swab to the spots' permeabilized epidermis. The application time varies from 2 minutes up to 5 minutes.

Figure 6: After two minutes in this patient, a uniform frost formed. The resorcinol is washed away.

Results

After the crust was removed, the patient experienced slight redness, which resolved in the following months. The result after one year is stable and the spots have disappeared **(Figure 7)**. The patient expressed satisfaction with the aesthetic results and reported increased confidence and psychological well-being.

Figure 7: The result after one year is stable and the spots have disappeared.

Conclusion

The 0.5 timedsurgical mixed peel technique and the other two timedsurgical mixed peelings offer a promising approach to treating all types of pigmentation, including penile pigmentation. This treatment provides effective and safe results with minimal discomfort and downtime. This case report highlights the potential of this standardized physicochemical method as an alternative to more invasive, less effective and less predictable treatments. We achieve long-lasting permanent results by reducing the number of melanocytes rather than simply inhibiting melanogenesis.

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