# **Hypotheses and Comment**

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# Risk of Melanoma after Treatment of Pigmented Lesions with Solcoderm

# **Key Words**

Pigmented lesions Solcoderm Melanoma

### Abstract

A 40-year-old patient developed a 5-mm-deep melanoma from a lesion on her chest which had been treated with Solcoderm 10 years previously. We recently described 3 other cases of melanoma that evolved in a lesion treated by Solcoderm. Much debate surrounds the recommendation as to the appropriate method for treatment of pigmented lesions when the removal is indicated for cosmetic reasons only. Most of the authors agree that any pigmented lesion which merits excision merits submission for histological examination. The aim of the present report was to express a warning regarding what we think is an inappropriate and hazardous method of treating pigmented lesions, namely their chemical destruction with Solcoderm. In view of the reported cases of melanoma evolving in lesions treated previously with Solcoderm, we believe that this treatment is absolutely contraindicated for pigmented lesions.

The management of nevi is a perplexing problem. Clearly, if all moles were removed, thousands of melanomas would be prevented. However, since nevi are the most common tumors of the skin and the great majority of them are not malignant or premalignant, removal of these lesions is impractical, impossible and not required on medical grounds. Removal of a pigmentary lesion is indicated for two main reasons: (1) if an accurate diagnosis cannot be made on clinical findings alone or whenever any clinical suspicion of malignancy or doubt exists and (2) if the patient desires removal for cosmetic reasons.

In the first group of patients there is no controversy about the right approach for treatment of the pigmented lesions. Total excisional biopsy with marrow margins is the technique of choice for most of the cases [1–6]. In exceptional cases, when the tumor is so large or is in an area where excisional biopsy is not feasible, incisional or punch biopsy could be performed [1–6].

Much debate, however, surrounds the recommendation as to the appropriate method for treatment of pigmented lesions in the second group of patients, namely those in whom there is no clinical suspicion of malignancy and removal is indicated for cosmetic reasons only.

Most of the authors agree that any pigmented lesion which merits excision merits submission for histological examination [1–6]. Most authors permit an incomplete excision of benign nevi [1–4], although some do not [5].

One should be aware, however, that incomplete excision of nevi, by shave biopsy and electrodesiccation, may stimulate the residual melanocytic nevus tissue to proliferate and give rise to a pathological picture very like an early melanoma, although of benign biological behavior [7–9].

We would like to express a warning regarding what we think is an inappropriate and hazardous method of treating pigmented lesions, namely the chemical destruction with Solcoderm.

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Solcoderm is an aqueous solution containing organic and inorganic acids in the presence of copper ions. The acid formulation was developed by Ravid et al. [10] and has been used until recently in Israel and Europe as a treatment for benign lesions such as seborrheic keratoses, solar keratoses, warts, condylomata, pilar cysts, nevi, hemangiomas, papillomas and dermatofibromas [11–14] and malignant lesions as basal and squamous cell carcinomas [15]. Use in the latter was strongly discouraged in view of the high recurrence rates and aggressive behavior of the recurrent tumors [16]. Solcoderm has become a popular alternative to surgery for the treatment of benign and malignant lesions. This chemical treatment of skin lesions promised a quick and 'complete' healing without a surgical procedure and the ensuing longlasting scar. The ease of treatment and the apparent cure appealed to both physicians and patients.

## **Solcoderm Treatment of Pigmented Lesions**

We recently described 3 cases of melanoma that evolved in a lesion treated by Solcoderm [17]. All 3 subjects experienced an apparent healing of the pigmented lesion and developed melanoma several months later. Two of the patients had metastases of their melanoma, the third had not. In view of the rapid appearance of a subcutaneous nodule in the third patient, however, a diagnosis of melanoma, rather than Solcoderm-induced pseudomelanoma, seems likely. Since all the patients were treated with Solcoderm without previous histological examination, the possi-

bility that the treated lesions were malignant prior to treatment cannot be excluded.

After sending the material for publication [17] we came across an additional case of melanoma following Solcoderm treatment. The patient, a 40-year-old woman, had undergone Solcoderm treatment 10 years ago for removal of apparently benign nevi. Several pigmented lesions on her back and chest were treated. She also underwent excisional biopsy of 2 additional nevi on her chest 2 years ago. Ten years after treatment with Solcoderm a 5-mm-deep melanoma was excised from a lesion on her chest which had previously been treated with Solcoderm. This could easily be proven since the melanoma arose 'from' the depressed scar that the Solcoderm treatment had left. Physical examination revealed more nevi on her back and chest which were clinically unsuspicious of malignancy. She had also an enlarged supraclavicular lymph node at the site of the excised melanoma.

This case differs from our previously reported cases in that 10 years elapsed between Solcoderm treatment and the development of the melanoma, compared to a maximum of 3 months in the previous 3 cases. This long interval between Solcoderm treatment and the development of melanoma raises the possibility that the treated lesion had been of benign nature when first treated, since it is very unusual for a melanoma to remain unchanged for 10 years.

Whatever the cause of the development of the melanomas in the presented cases may be, the conclusion is clear: Solcoderm treatment is absolutely contraindicated for pigmented lesions.

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