Vitiligo Patients Seeking Depigmentation Therapy: A Case Report and Guidelines for Psychological Screening

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Practice Points

- Depigmentation therapy is used in dermatology practice to even skin tone in individuals with extensive vitiligo.
- Candidate selection for depigmentation involves medical and psychological evaluation.
- Inclusion criteria for depigmentation therapy include body surface area greater than 30% and/or cosmetically noticeable disease (eg, face, hands) as well as good understanding of the consequences of depigmentation and psychological stability.
- Exclusion criteria include emotional instability, psychiatric instability, psychosis, suicidality, and fear of racial shifting.

Vitiligo is characterized by a loss of cutaneous and mucosal pigmentation and often is associated with psychological distress. Depigmentation therapy can be used to eliminate residual pigment, thereby creating an evenly depigmented skin tone. Patients often seek depigmentation therapy to even their skin tone when a large body surface area is affected by vitiligo or when exposed areas (eg, face, hands) are affected and do not respond to repigmentation therapy. Psychological screening of patients is recommended when considering depigmentation therapy for vitiligo. We report the case of a 24-year-old man with vitiligo who sought depigmentation therapy and withheld crucial information regarding his psychiatric and medication history. We also provide guidelines for a rational approach to psychocutaneous screening of patients with vitiligo seeking depigmentation therapy.

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The effects of vitiligo on the psyche are complex. Psychological stressors can both precipitate and exacerbate vitiligo, and the effects of the disease also can be psychologically distressing.[1] Papadopoulos et al[2] reported in 1998 that vitiligo patients typically experienced a high number of stressful life events, usually related to loss and/or bereavement, in the year prior to onset of vitiligo. In this study, 73 vitiligo patients were age matched with controls (48 who had dystrophic epidermolysis bullosa) who did not have vitiligo. The respondents completed the schedule of recent experience, a scale to address recent life occurrences that reports responses based on life scale units. Vitiligo patients had a statistically higher rate of bereavements, injuries, sexual difficulties, and illnesses, and a greater rate of alteration in their eating and sleeping habits.[2] Sampogna et al[3] queried 181 vitiligo patients and identified worry over disease worsening in 60%, depression in 31%, shame in 28%, anger in 37%, and embarrassment in 34%. Ongenae et al[4] reviewed psychological

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morbidity in vitiligo, highlighting the extensive psychological morbidity of the illness. Picardi et al[5] also demonstrated an association of multiple (ie, 3 or more) uncontrollable life events with exacerbations of vitiligo as well as disease onset.

The negative psychological impact of vitiligo has been extensively reported in the literature.[1-6] Emotional responses to the disease can include depression, guilt, shame, and fear of disease extension and/or loss of disease control, the latter being seen in 60% of patients with vitiligo.[1,3] Impairments to daily functions can include limitations related to clothing, social and leisure activities, and daily routines.[4] The visibility of lesions, especially on the face and hands, can promote self-consciousness in social settings. Patients may feel isolated and become socially uncomfortable, which often impacts interpersonal relationships with friends, family, and partners.

One of the major goals of therapy for vitiligo is repigmentation of the affected skin; however, complete repigmentation is not possible in many patients. Therefore, a secondary goal is to give patients an even skin tone so that their pigmentation does not attract unwanted attention. Topical application of 20% monobenzyl ether of hydroquinone (MBEH) can even skin tone and permanently destroy melanocytes. Because the hair follicles do not lose their melanocytes, repigmentation after sun exposure can occur and patients need constant sun protection to avoid accidental follicular repigmentation. For some individuals with vitiligo, depigmentation therapy yields beneficial cosmetic and psychological outcomes.[6]

Depigmentation therapy can have a deleterious psychological impact on patients; therefore, not every patient is a candidate for this treatment option. Patients may have unrealistic goals and expectations, or they may not be psychologically able to handle changes in perceived race or ethnicity associated with lightening of skin tone. Other patients may have underlying psychological disease and may have unrealistic expectations about the potential for improvement in their mental health. Depigmentation is a slow process, requiring both patience and compliance, sometimes for a few years, among patients.

We report the case of a 24-year-old white man with segmental vitiligo of the penis who sought depigmentation therapy. This case is illustrative of the many factors that are associated with assessing candidates for depigmentation therapy.

Case Report

A 24-year-old white man was referred for penile depigmentation after multiple medical therapies for repigmentation provided by 3 outside practitioners had failed. The patient also had tried medical tattooing to correct the problem, which caused a bluish tint in the depigmented skin. The area was treated later by a second tattoo artist, which resulted in a white discoloration. The patient reported no family history of vitiligo or autoimmunity and denied having other medical or psychiatric illnesses. He reported no notable romantic relationships in the last 10 years. Physical examination via Wood lamp revealed linear hypopigmentation of one-third of the penile shaft (segmental vitiligo) without scrotal or glans involvement. A full-body examination revealed hypopigmented tinea versicolor, which did not bother the patient.

The risks and benefits of depigmentation therapy were reviewed, including consort bleaching (ie, accidental transfer of bleach to a consort, causing inadvertent depigmentation), as well as the risk for mismatch with surrounding skin, contact depigmentation of the adjacent scrotum and inner thighs, and contact allergy to bleaches. The patient appeared to have unrealistic goals and expectations for treatment and was deemed to be a poor candidate for bleaching based on the associated risks, site of disease, and limited surface area. The patient still sought depigmentation and was referred to a clinical psychologist (C.G.) specializing in psychocutaneous illness for evaluation and screening.

Prior to his psychological consultation, the patient's mother communicated with the psychologist and described her son as having a reclusive lifestyle but never mentioned his psychiatric history. The patient arrived late for his appointment. He was guarded and defensive and was neither reflective nor interested in the degree of distress caused by his vitiligo. He only repeated, "I want my penis to be an even color." After 20 minutes, the patient finally mentioned that he had constant and intrusive thoughts about his penile vitiligo throughout the day. More than 30 minutes into the consultation, the patient revealed he had an 8-year history of obsessive-compulsive disorder for which he had been intermittently seeing a psychiatrist and previously had been prescribed 2 psychiatric medications, the names of which he could not recall, that he currently was not taking. The patient also mentioned he had not made his psychiatrist aware of his penile vitiligo or his distress about it because the psychiatrist was a man. It was explained to the patient that his constant distress about his penile vitiligo was part of his obsessive-compulsive disorder and that if he was psychiatrically stable, he would probably not find his condition as distressing. The patient reflected and stated that he would probably find something else to obsess about once his vitiligo was "fixed." The patient was advised to return to his psychiatrist and

to enter weekly psychological therapy to deal with his condition.

On psychological evaluation it was noted that the patient was extremely ashamed about his vitiligo, and its appearance on the penis caused him to feel diminished as a man, preventing him from seeking sexual relationships. It also was notable that the patient's mother colluded in hiding his psychiatric history; they both appeared to share the fantasy that depigmentation therapy would resolve his psychological problems.

Comment

Vitiligo is an autoimmune disorder characterized by a loss of cutaneous and mucosal pigmentation.[7,8] It can have a generalized or localized presentation. Segmental disease is a subtype of localized vitiligo, which is more common in children.[8,9] Good repigmentation of generalized vitiligo is achieved in many patients in the initial stages of illness. Treatment options for generalized and localized vitiligo include topical therapies such as tacrolimus and corticosteroids, excimer laser therapy, narrowband UVB phototherapy, topical and systemic psoralen plus UVA, and cover-up cosmetics such as self-tanners and camouflage makeup.[8-11] Narrowband UVB phototherapy tends to provide approximately 70% repigmentation in patients with generalized (ie, nonsegmental) vitiligo.[11,12] Unfortunately, in many patients loss of pigmentation is unlikely to resolve in a cosmetically acceptable fashion. If a patient loses 10% of color, 70% repigmentation results in a residual absence of color in 3% of the skin, which may be unnoticeable. For patients with 33% skin color loss, even 70% repigmentation would leave behind a residuum of 10% depigmentation. Furthermore, mottled repigmentation of the face and forearms due to uneven resolution of pigment loss can be a source of distress for many patients. Extensive lesions on the forearms, hands, head, and neck that do not respond to other medical treatments, including UV light, may not result in an even skin tone unless depigmentation therapy is used. Long-standing vitiligo (ie, ≥5 years) on the fingertips is unlikely to medically repigment.[7,8,13]

The depigmenting effects of MBEH were first reported in 1939 in a case of occupational leukoderma from gloves containing MBEH.[13] Later MBEH was described as a medical depigmenting agent that prevents melanin production and induces destruction of pigment cells.[14,15] For medical bleaching, MBEH 20% is applied to the skin daily for an average of 10 months. Although the degree of response is not universal, most patients with skin that is evenly depigmented are satisfied with the results.[7] Monobenzyl ether of hydroquinone can cause local irritant or

Table 1.
Screening Parameters for Vitiligo Patients Seeking Depigmentation Therapy

Medical Screening
Medical history
History of psychological/psychiatric disorders
Medication history
History of medical therapy
UV light
Topical therapy
Unusual therapies (eg, tattooing, herbal therapeutics)
Social history (presence of disability in 1 or more of 4 parameters due to vitiligo)
School attendance
Job
Marital status
Patient perception of excessive public attention (eg, staring, pointing)
Physical examination (full-body examination)
Body surface area calculation
Presence of cosmetically significant areas of depigmentation (eg, face, hands)
Psychological/Psychiatric Screening
Extensive interview
Intrusive thoughts regarding vitiligo
Presence of psychosis
Significant depression
Personality disorders (eg, borderline personality disorder)
Depression scores
Modeling
"What if" scenarios (ie, what if the color does not go away? what if you are allergic to the product and the color cannot be bleached?)
"How would you feel" scenarios (ie, how would you feel if you were mistaken for a white individual?)
Ability to comply (ie, are you able to completely avoid the sun for the rest of your life?)

Table 2.
Inclusion and Exclusion Criteria for Depigmentation Therapy

Inclusion Criteria
Vitiligo affecting >30% body surface area or cosmetic areas that cannot be repigmented and/or patients with vitiligo affecting more than 1 cosmetically notable unit (eg, face, neck, fingers, hands, arms) that has not responded to therapy after at least 5 years' disease duration or cannot be repigmented (eg, fingertips)
Psychological stability
Ability to tolerate perceived race
Reasonable goals regarding depigmentation, including improved cosmetic appearance
Ability to comply with long-term sun/UV avoidance
Exclusion Criteria
Strong possibility of repigmentation with medical therapy not previously tried
Psychological and/or psychiatric instability:
Psychosis
Major depression (untreated)
Body dysmorphic disorder
Suicidality
Intrusive thoughts or obsessive-compulsive behaviors with regards to vitiligo
Fear of racial shifting
Unreasonable goals including beliefs that personal problems or relationships will be cured by depigmentation or magical thinking regarding depigmentation
Relative Exclusion Criteria
Need to be in the sun, either because the patient has a job outdoors or participates in regular outdoor activities

allergic contact dermatitis.[16] When depigmented skin is exposed to the sun, follicular repigmentation may occur.[17] Some patients can successfully undergo depigmentation therapy a second time, while others may experience persistent and permanently blotchy repigmentation that is no longer amenable to bleaching. For bleach-resistant patients, the Q-switched ruby laser with or without 4-methoxyphenol can be used but is not universally successful.[18,19] All patients undergoing depigmentation therapy are warned to avoid sun exposure and use protective clothing in combination with liberal daily application of broad-spectrum sunscreens with a high sun protection factor.

Medical and psychiatric screening is required prior to depigmentation therapy (Table 1). Unrealistic expectations for depigmentation therapy also should signal a need for psychological or psychiatric referral. Psychiatric screening (Table 1) should start with an extensive interview of the patient to determine if he/she has underlying psychological conditions. Psychiatric history is crucial, as it may be a predictor of future psychological issues. Psychiatric conditions must be explored in great depth.

Psychological stability of the patient is required for proceeding with depigmentation therapy to ensure the patient is competent to make a sound medical decision to undergo treatment (Table 2). Psychosis or major depression, particularly involving suicidality, are indications of instability and are contraindications to depigmentation (Table 2). Depression screening can be used to aid in decision making in cases of borderline depression; these patients may be candidates for depigmentation after depressive symptoms resolve through treatment. Detection of intrusive thoughts regarding vitiligo may signal obsessive-compulsive disorder, as seen in our patient. Seeking depigmentation for a small patch of vitiligo may signal body dysmorphic disorder. It also is important to address the patient's medication history in psychological screening, as antipsychotic medications would indicate psychotic features. A history of unusual therapies, such as cosmetic tattooing, or repetitive mutilation of any specific area may herald psychiatric issues and should be red flags for the presence of underlying psychiatric issues.

Abnormal social relationships and/or poor school or work performance attributed to vitiligo lesions may support the need for depigmentation therapy; however, the patient must have realistic goals and expectations. Magical thoughts related to the resolution of vitiligo (eg, to save a marriage) may be a contraindication for treatment. Depigmentation therapy may be reconsidered at a later date if appropriate psychological intervention with regular therapy can correct these unrealistic goals. Modeling possible scenarios may help identify any unrealistic goals or poor coping mechanisms. For example, asking a patient what will happen if the pigmentation does not respond to treatment or if he/she is allergic to the bleach and cannot be treated can yield either an appropriate or inappropriate response; an appropriate response might

be that he/she will use cover-up cosmetics, while an inappropriate response might be suicidal thoughts or weeping.

Although mental health is important, a physical examination and subsequent review of possible repigmentation techniques for vitiligo are important in ensuring that patients are aware of the risks and benefits of treatment as well as alternative options. If the physician believes good repigmentation may be possible with medical therapy, the patient needs to be made aware of this likelihood prior to depigmentation. All physical examinations should make note of cosmetically important areas that are affected and the total body surface area involved.

Depigmentation therapy can pose unique complications for patients with darker skin types, as bleaching in skin of color can change a patient's perceived race and/or ethnicity. For example, black or Hispanic patients may be perceived as white following depigmentation therapy, which can cause subsequent social issues. Furthermore, this major alteration in self-image can destabilize patients and needs to be addressed at great length prior to treatment.

Finally, compliance also is an important issue to address during screening. Many patients do not want to undergo therapies that can take months to years to complete; others are not able to completely avoid the sun for the rest of their lives because of outdoor jobs or regular outdoor activities. These patients are not good candidates for depigmentation therapy.

Conclusion

Our case of a patient who was noncompliant with psychiatric therapy for obsessive-compulsive disorder and sought depigmentation therapy highlights the need for psychological screening of vitiligo patients prior to initiating therapy.

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