Olanzapine Is Effective in the Management of Some Self-Induced Dermatoses: Three Case Reports

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Self-inflicted dermatoses are often difficult to treat. We present three patients with excoriated acne, self-induced skin ulcers, and trichotillomania, respectively, whose symptoms responded favorably to a 2- to 4-week course of the atypical antipsychotic olanazpine at a dosage of 2.5 to 5.0 mg daily. In two of three patients, the efficacy of the olanzapine was most likely related to an attenuation of dissociative symptoms that were associated with the self-induced skin ulcers and trichotillomania.

Self-induced dermatoses, whether primary in nature, such as dermatitis artefacta, neurotic excoriations, and trichotillomania, or those associated with other underlying skin disorders, such as excoriated acne, are usually difficult to treat.[1,2] Furthermore, the self-inflicted component can exacerbate the course of the underlying dermatologic condition, *eg*, in the case of excoriated acne. Self-excoriative behavior in dermatologic disorders can be a symptom of a wide range of psychopathologic disorders,[1,2] such as obsessive-compulsive disorder, major depressive disorder, delusional disorder including delusions of parasitosis, malingering, Munchausen's syndrome, or a personality disorder. In some cases of self-induced dermatoses, no definite comorbid psychiatric disorder is identified. While some comorbid psychopathologic states such as obsessive-compulsive disorder, major depressive disorder, or a delusional state respond to psychopharmacologic interventions, in most instances the self-inflicted skin disorder is difficult to treat.[1,2] We present three case studies of patients with self-induced dermatoses who responded favorably to a course of an atypical antipsychotic medication olanzapine.[3] All three patients reported that they did not consciously intend to hurt themselves when self-inflicting their lesions, and they were not suicidal.

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Case Reports

Patient 1—This 29-year-old married woman, mother of two children ages 5 and 1, working as a government official, was seen in consultation for her tendency to severely self-excoriate her acne that was present on her face, shoulders, and upper back. Dermatologic evaluation revealed acne-related scarring mainly on the shoulders and upper arms and some recently excoriated lesions on the face and shoulders. The patient reported that she first developed acne around age 21 and associated its onset with some major stresses in her life, especially stresses in her relationship with her boyfriend. The patient's psychiatric evaluation did not reveal any major psychiatric disorder (DSM IV).[4] The patient, however, reported that she tended to self-excoriate her acne when she felt stressed and would often pick her acne lesions till they started to bleed. She was fully aware that she was picking her acne and acknowledged the self-inflicted nature of her lesions. The self-excoriation would result in exacerbation of the underlying inflammatory process in acne, which in turn healed with unsightly scars. Over the years the patient had developed significant degrees of scarring and post-inflammatory hypopigmentation, especially in the region of her shoulders and upper arms. The patient was very self-conscious about the scarring and over the previous 2 years had refrained from swimming in a public pool and avoided wearing any clothing that exposed her shoulder and upper arms. When the patient was seen in consultation she reported recent stresses in her marriage and an associated increase in her self-excoriative behavior. The patient especially

had a tendency to pick her skin at night while trying to get to sleep. The patient was asked to rate her tendency to self-excoriate her acne on the following 10-point scale (0 = not at all; 9 = very markedly): "*I tend to want to pick my acne till it starts to bleed*." At the time of the assessment the patient rated herself as an "8" out of 9 on the 10-point scale described above. In addition to receiving standard topical therapies for her acne, the patient was started on olanzapine 2.5 mg at bedtime and followed every 2 weeks. After 2 weeks, the patient reported an improvement in her self-excoriative behavior, and rated herself as a "4" out of 5 on the 10-point scale. She reported that she did not pick her skin as much at bedtime. The dosage of her olanzapine was increased to 5 mg at bedtime and the patient was reassessed in 2 weeks. At this time, a significant improvement was noted in the self-excoriative behavior. No freshly excoriated lesions were noted and the patient rated herself as a "1" or "2" on the 10-point scale. The patient continued using olanzapine at the dosage of 2.5 mg at bedtime for 3 months and then stopped the olanzapine. For the 4 months following discontinuation of olanzapine she has maintained significant improvement in her excoriated acne. She is also receiving marriage counseling and working on developing more effective coping mechanisms for dealing with her conflicts in her relationships.

Patient 2—This 24-year-old single schoolteacher was referred with a history of self-inflicted ulcers on her left forearm. Dermatologic examination revealed superficial, fresh ulcers on her left forearm. The patient noted that she tended to pick her forearm when she experienced high levels of anxiety or anger—this would typically occur when she addressed the severe abuse, including incest, that she had experienced as a child. The patient had been addressing these issues in psychotherapy recently, as she was planning to get married and felt that she needed to resolve her feelings about the abuse before entering the marriage. The patient's fiancé had been very supportive of the patient during the course of the therapy. The patient fully acknowledged the self-inflicted nature of the lesions on her arm. She reported that when she was addressing some very emotionally charged issues in therapy, she was aware that she would start stroking and scratching the skin of her left forearm. On occasion this self-excoriation would continue, and for a period she would not be aware that she was vigorously excoriating and scratching her skin till she saw blood under her fingernails. She reported that during these times when she was not aware of the self-excoriative behavior, she did not even seem to be in touch with the pain from her self-inflicted lesions. This state of decreased awareness could be present for a few hours. For example, she could scratch herself to the point of bleeding, develop superficial ulcers on her forearm, and become aware that she had been sitting in front of the television and had intended to watch a 2-hour movie that was just ending. She typically would not remember most of the content of the movie either, during these episodes.

Psychiatric evaluation did not reveal symptoms consistent with a major psychiatric diagnosis.[4] The patient had been worked up neurologically and a seizure disorder had been ruled out. Her mental state when she self-inflicted the lesions was consistent with a dissociative reaction. She would experience a dissociative reaction when she was dealing with the intensely traumatic experiences from her childhood. During these times she would start to vigorously stroke her left forearm—patients who dissociate often tend to seek out intense stimulation in an attempt to "keep in touch." The vigorous stroking was not sufficient to prevent the patient from dissociating fully for short periods of time. During these times she would continue to stroke vigorously and then scratch her skin with her nails to the point of bleeding. She would end up developing superficial ulcers on her forearm as a result of her vigorous stroking and self-excoriative behavior. The patient's dermatologic diagnosis did not fit the strict criteria for neurotic excoriations, as she was not always aware of her self-excoriative behavior and could not be classified as dermatitis artefacta, since she fully acknowledged the self-inflicted nature of her lesions.[5]

After the initial evaluation the patient was started on olanzapine 2.5 mg at bedtime to deal with her intense feelings of anger, anxiety, and dissociative symptoms. On the days when she was having her psychotherapy sessions she took an additional 2.5-mg dose of olanzapine during the day. Within the first week after starting olanzapine, the patient noted a significant decrease in her level of emotional turmoil—which typically manifested as intense feelings of anxiety and/or anger especially when she was dealing with some very traumatic issues in psychotherapy. After 2 weeks of olanzapine 2.5 mg at bedtime and 2.5 mg during the daytime as required, there was no evidence of newly developed self-inflicted lesions and her dissociative symptoms were no longer present. The patient has been on olanzapine for 6 months and has been using the medication at an average dosage of 2.5 mg 1 to 2 times per week as required. As she is able to more effectively deal with her feelings about her childhood trauma, she has been using the olanzapine less frequently.

Patient 3—This 30-year-old single, unemployed woman, mother of a 1-year-old child, was referred for further management of her trichotillomania. Der-

matologic evaluation revealed patchy alopecia in the region of the vertex. The patient reported that her trichotillomania had first started around age 13 years when she and her siblings were sent away to boarding school after the patient's mother had died and her father remarried. The patient remembers feeling extremely lonely and experiencing profound feelings of abandonment. The trichotilllomania had emerged from time to time since then and the patient typically would wear her hair in a ponytail to cover the area of thinning hair in the region of the vertex. The patient had experienced exacerbations of her trichotillomania over the years, and these exacerbations were typically precipitated by stressful life events, especially those associated with feelings of abandonment. At the time of the assessment, the patient had been experiencing interpersonal difficulties with her ex-boyfriend, who was also the father of her daughter. The patient was hoping to reconcile with her exboyfriend, however he was in a new relationship and was very rejecting of the patient, which was associated with an exacerbation of the trichotillomania. The patient described that she would feel an uneasy tingling sensation in her scalp when she was feeling stressed and this would be relieved by her plucking the hair in the region of tingling. The patient described a strong urge to pluck her hair when she experienced the tingling in her scalp. Once the patient started plucking her hair she would often experience periods when she was not conscious of her hair-plucking. The hair-plucking would usually result in a patch of alopecia that was about 2 inches in diameter. The patient estimated that she could be plucking her hair for 1 to 2 hours and not have conscious recollection of doing this. Over the years, her friends had sometimes observed that she would be sitting in front of the television watching a program and would be twirling and plucking her scalp hair. During these episodes the patient would not have recollection of the hair-plucking behavior or the program that she had intended to watch. Since her teenage years, the patient had been on various antidepressants including clomipramine, fluoxetine, and paroxetine. The antidepressants did not have a significant or sustained effect upon the hair-pulling behavior.

Psychiatric evaluation did not reveal a comorbid primary mental disorder other than trichotillomania.[4] The trichotillomania, however, was associated with a dissociative state where the patient did not have full recollection of her hair pulling behavior. The patient was started on olanzapine 2.5 mg and this was increased to 5 mg at bedtime. After 2 weeks, the patient reported an increased sense of well-being and reported that she was able to deal with her exboyfriend more effectively. Over the next 4 weeks, psychiatric evaluation revealed that she had experienced a significant decrease in her dissociative symptoms, and the hair-pulling behavior had not occurred during this period. Subsequently the patient was maintained on olanzapine 5 mg for 6 months, and this was associated with a significant improvement in her trichotillomania and hair regrowth. The olanzapine was stopped after 6 months because the patient had come to terms with the breakup of her relationship, had found a good job, and was beginning to increase her social circle. Over the 6-month period while she was receiving olanzapine, the patient also reported that the tingling sensation in her scalp that preceded her desire to pull her scalp hair was not as strong. Even though she plucked her hair on a few occasions, she did not enter a dissociated state when she was not aware of her hair-plucking behavior.

Comments

We have presented three patients with self-inflicted dermatoses, including excoriated acne, self-induced skin ulcers, and trichotillomania, that all responded favorably to olanzapine 2.5 mg to 5 mg within 2 to 4 weeks of initiation of therapy. To our knowledge, the efficacy of olanzapine in the management of self-inflicted dermatoses has not been previously reported.

The first patient with excoriated acne tended to pick her acne when she felt psychologically stressed. The other two patients also reported a stress-associated exacerbation in their symptoms, however they both also tended to dissociate, during at least part of the time when they were engaged in the self-mutilative behavior. None of the patients met the standard criteria for a major mental disorder other than trichotillomania.[4] DSM IV defines dissociation as "a disruption in the usually integrated functions of consciousness, memory, identity, or perception of the environment."[4] The disturbance may be sudden or gradual, transient or chronic.[4] Dissociation can often be associated with a numbing of pain perception, and this is most likely the basis for the fact that some patients can self-inflict significant injury without being aware of their behavior. It is important to recognize that there is a strong causal connection between the development of dissociative symptoms and a history of significant psychologic trauma.[6] Dissociative defenses used to cope with trauma in early life tend to be maintained throughout life to cope with stressful situations, even stress that is not related to abusive factors.[6] Children are prone to dissociate more freely than adults.[6] Dissociative symptoms probably play an important role in self-induced dermatoses that are often first evident during childhood, such as trichotillomania.

Small doses of antipsychotic medications are often used in the treatment of dissociative states. The an-

tipsychotic medications help the patient to cope with the stressor more effectively and this in turn attenuates the dissociative reaction. Since the self-inflictive behavior that culminated in significant injury to the skin occurred mainly during a dissociated state in patients 2 and 3 mentioned previously, attenuation of the dissociative reaction resulted in a marked decrease in the self-mutilative behavior. The first patient did not dissociate, however was able to cope more effectively with her life stresses with the antipsychotic medication, and this in turn resulted in a significant decrease in her tendency to severely excoriate her acne.

The pharmacologic management of anxiety states in dermatology include the use of benzodiazepines and antipsychotic agents.[1] Benzodiazepines can have an addictive potential and have been associated with amnesia in some patients. Benzodiazepines must therefore be used with caution in patients who may require treatment for their anxiety- or stress-related symptoms for several months, and in the patient who is dissociating. The antipsychotic drugs used in low doses have anxiolytic properties, and this is beneficial to the patient who is experiencing dissociative anxiety. Olanzapine[3] has significant *in vitro* inhibitory activity at histamine H1, dopamine, serotonin, α_1-adrenergic, and muscarinic receptors. The antihistaminic properties of olanzapine contribute towards its anxiolytic properties and are also likely to be beneficial in situations where the self-excoriation often is associated with pruritus. The current United States Food and Drug Administration-approved indication for olanzapine is for the management of the manifestations of psychotic disorders.[7]

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