Self-Injurious Skin Picking: Clinical Characteristics, Assessment Methods, and Treatment Modalities

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Self-injurious skin picking is characterized by repetitive, ritualistic, or impulsive skin manipulation that results in tissue damage. It occurs in the absence of an underlying dermatologic condition and causes significant distress or impairment in daily functioning. The present article reviews the clinical characteristics of self-injurious skin picking, methods for assessing this problem, and modalities of treatment. A clinical vignette describes the implementation and outcome of cognitive-behavioral therapy for a patient with self-injurious skin picking and comorbid body dysmorphic disorder. [Brief Treatment and Crisis Intervention 3:249–260 (2003)]

KEY WORDS: self injury, skin condition, dermatology, body dysmorphic disorder.

Clinical Characteristics of Self-Injurious Skin Picking

Self-injurious skin picking is characterized by repetitive, ritualistic, or impulsive skin picking in the absence of an underlying dermatologic condition. It was first described in 1875 by Wilson, who observed self-inflicted excoriations in his neurotic patients (Fruensgaard, Hjortshoj, & Nielsen, 1978). Self-injurious skin picking has appeared in the literature under various names, including acne excoriée, dermatillomania, self-inflicted or neurotic dermatosis, and psychogenic excoriation. It is a relatively common behavior that is not restricted to psychiatric populations and is often performed as part of the daily grooming routine (Bohne, Wilhelm, Keuthen, Baer, & Jenike, 2002; Keuthen et al., 2000).

Although different criteria have been suggested (e.g., Arnold, Auchenbach, & McElroy, 2001; Wilhelm et al., 1999), most researchers agree that self-injurious skin picking differs from nonpathological skin picking in that the former leads to significant tissue damage and causes significant distress or impairment in daily functioning. Prevalence estimates for self-injurious skin picking in college students (Bohne et al., 2002; Keuthen et al., 2000) and dermatologic populations (Griesemer, 1978; Gupta, Gupta, & Haberman, 1987) indicate lifetime prevalence rates between 2% and 4%, suggesting that self-injurious skin picking is not a rare condition. It appears to be more
prevalent in women than in men (Arnold et al., 2001; Fruensgaard, 1984; Wilhelm et al., 1999), although this may reflect differences in treatment seeking between men and women. Self-injurious skin picking often begins in adolescence and early adulthood. The course of the disorder tends to be chronic, with the intensity of skin picking waxing and waning over time (Wilhelm et al., 1999).

Individuals who engage in self-injurious skin picking usually use their fingers or fingernails to touch, scratch, rub, bite, or squeeze their skin (Wilhelm et al., 1999). Self-injurious skin pickers use pins, tweezers, or small instruments to lance or dig into their skin more often than do nonclinical skin pickers (Keuthen et al., 2000). Common sites for picking behavior are the face, upper body (including the neck, back, and chest), and extremities such as the arms, cuticles, and legs (Arnold et al., 1998; Wilhelm et al., 1999). The duration of skin-picking episodes varies considerably across individuals. It may range from a few minutes to several hours (Arnold et al., 1998; Wilhelm et al., 1999). Survey results indicate that most clinically severe skin pickers experienced minor sores, if not more severe tissue damage, secondary to picking (Wilhelm et al., 1999). Approximately half of all skin pickers experience “deep craters” and infections due to skin picking. The severity of lesion making varies from several to over 100 lesions (Wilhelm et al., 1999). Some individuals experience visible disfigurement as a result of tissue damage (Fruensgaard, 1984; Stout, 1990). Cognitive and social consequences of self-injurious skin picking include marked dissatisfaction with appearance and profound worries that skin picking could be discovered, as well as social embarrassment and avoidance of social situations (Wilhelm et al., 1999).

Although more than half of all individuals engaging in self-injurious skin picking report picking healthy skin (Wilhelm et al., 1999), many self-injurious skin pickers pick pimples, scabs, insect bites, or infections (which can result from previous skin-picking episodes). Skin-picking episodes often start with looking at or touching the skin. Increased skin picking often occurs in specific sedentary situations, such as while watching television, being on the phone, doing crosswords, reading, or driving (Arnold et al., 1998; Fruensgaard, 1984; Fruensgaard et al., 1978; Koblenzer, 1987). Skin picking can take place as a grooming ritual or as a habitual behavior largely outside an individual’s awareness. It can also be an intentionally executed behavior used to regulate feelings of tension, nervousness, and frustration (Arnold et al., 1998; Deckersbach, Wilhelm, Keuthen, Baer, & Jenike, 2002; Stein, Hutt, Spitz, & Hollander, 1993; Twohig & Woods, 2001; Wilhelm et al., 1999). For example, unlike their nonclinical counterparts, many skin pickers report feelings of stress, tension, anger, boredom, sadness, or anxiety precipitating skin-picking episodes (Arnold et al., 1998; Keuthen et al., 2000; Wilhelm et al., 1999). In addition, the desire to improve appearance and perfectionism seem to be common motives for severe self-injurious skin picking (Koblenzer, 1983; Stein et al., 1993).

Retrospective self-report ratings of the intensity of different feelings before, during, and after skin-picking episodes indicate that feelings of tension decrease over the course of the episodes, while feelings of satisfaction and relief increase (Arnold et al., 1998; Wilhelm et al., 1999). During the skin-picking episodes, self-injurious skin pickers often report being in a trancelike state or feeling mesmerized (Wilhelm et al., 1999). Over the course of the skin-picking episode, feelings of shame, guilt, and pain increase, but most individuals report that they are unable to stop picking until their skin is bleeding (Koblenzer, 1992; Wilhelm et al., 1999). Skin-picking episodes are commonly followed by feelings of embarrassment, shame, and guilt.
As an isolated behavior, self-injurious skin picking has been associated with numerous psychiatric conditions. For example, it has been described in the context of mental retardation (e.g., Prader-Willi Syndrome) and delusional parasitosis, in which individuals scratch their skin and cause skin damage and inflammation in response to imagined parasites (Neziroglu & Mancebo, 2001). Surveys conducted in populations of self-injurious skin pickers in psychiatric settings yielded increased rates of obsessive-compulsive disorder (OCD), body dysmorphic disorder (BDD), and obsessive-compulsive personality disorder (OCPD) (Arnold et al., 1998; Wilhelm et al., 1999). Individuals with comorbid OCD have been described as performing skin picking in response to obsessions (e.g., symmetry or fear of harming others), and picking can be performed in a compulsive and ritualistic manner (Neziroglu & Mancebo, 2001). Patients with BDD pick their skin to remove or improve upon imagined or slight imperfections in their appearance such as pimples or hypo/hyperpigmentation (Deckersbach et al., 2002; Neziroglu & Mancebo, 2001). High rates of mood disorders (major depression, dysthymia) have also been reported in samples of skin pickers, as well as increased rates of anxiety disorders (Arnold et al., 1998; Wilhelm et al., 1999) and substance abuse. As hypothesized by Neziroglu and Mancebo, substances such as cocaine, methylphenidate, phenelzine, amphetamine, and anticholinergic drugs may produce tactile sensations that precipitate skin picking. Finally, one study reported increased rates of trichotillomania and borderline personality disorder, suggesting a link between self-injurious skin picking and disorders of impulse control and emotion regulation (Wilhelm et al., 1999).

**Assessment**

Unlike other behavioral problems such as anxiety or mood disorders, there are no structured diagnostic interviews available that provide standardized assessment of self-injurious skin picking. However, for the assessment of skin-picking severity and its psychosocial consequences, several clinician-rated and self-report scales have been developed.

The Skin Picking Treatment Scale (SPTS; Simeon et al., 1997) is a five-item clinician-rated scale modeled after the Yale-Brown Obsessive Compulsive Scale (Y-BOCS). The items assess the intensity of urges to pick, skin-picking frequency, duration of skin picking, control over the behavior, and interference with functioning. Each item is rated on a 0–4 scale, resulting in a range of total scores from 0 to 20. In one randomized controlled trial assessing the efficacy of fluoxetine for self-injurious skin picking, the SPTS failed to document significant changes with treatment in contrast to the Clinical Global Impression change score and a visual analogue scale. The psychometric properties of the SPTS have not yet been investigated.

Teng, Woods, Twohig, and Marcks (2002) have published a brief five-item self-report “Habit Questionnaire” that provides a standardized assessment of the frequency and duration of body-focused repetitive behaviors (BFRBs). In the Habit Questionnaire, individuals indicate “yes” or “no” if they have engaged in mouth chewing, nail biting, or skin biting, picking, or scratching. For each endorsed behavior, participants also indicate how frequently they have engaged in the behavior (less than five times per day, or five times or more per day) and for how long they have been doing the behavior (less than 4 weeks, 4 weeks to 12 months, or longer than 12 months). Finally, participants specify whether the behavior interferes with daily functioning and results in injuries such as per-
manent scarring or tissue damage. The Habit Questionnaire exhibited moderate test-retest reliability ($\phi = .69$) in a sample of undergraduate psychology students. Students who engage in BFRBs report higher levels of depression and anxiety than students who do not engage in BFRBs (Teng et al., 2002). Students exhibiting skin picking as assessed by the Habit Questionnaire also report more awareness of somatic activity as assessed by the Pennebaker Inventory of Limbic Languidness (Pennebaker, 1982) than do students who fail to report any BFRBs (Teng et al., 2002).

Keuthen and colleagues have developed a skin-picking inventory (available from S. Wilhelm) that provides a comprehensive assessment of skin-picking phenomenology, associated feelings, onset, and course of skin picking. The skin-picking inventory includes self-rated scales for feelings experienced before, during, and after skin-picking episodes (Wilhelm et al., 1999). It also includes two self-report questionnaires that assess skin-picking severity and its psychosocial consequences. These instruments are described below.

The Skin Picking Scale (SPS; Keuthen, Wilhelm, et al., 2001) is a six-item self-report questionnaire that, like the SPTS, is modeled after the Y-BOCS and assesses the severity of self-injurious skin picking. The SPS items assess the frequency of urges to pick the skin, intensity of urges, time spent on picking, interference due to skin picking, and associated distress and avoidance. All items are rated on a 5-point scale ranging from none (0) to extreme (4) with intermediate steps labeled mild (1), moderate (2), and severe (3). Total scores can range from 0 to 24. In a sample of clinically severe self-injurious skin pickers, the SPS had moderate internal consistency, with a Cronbach alpha of .80. Clinically severe self-injurious skin pickers obtained higher SPS scores than individuals who did not meet criteria for self-injurious skin picking (clinically severe skin pickers’ mean = 12.78, $SD = 3.83$, range 5–22; nonclinical skin pickers’ mean = 2.83, $SD = 2.56$, range 0–11). The SPS score was moderately correlated with the self-reported average daily duration of skin-picking episodes in a sample of clinically severe skin pickers (Keuthen, Wilhelm, et al., 2001). An SPS score of 7 best separated the groups of clinically severe from nonclinical skin pickers.

The Skin Picking Impact Scale (SPIS, Keuthen, Deckersbach, Wilhelm, et al., 2001) is a 10-item self-report questionnaire that assesses the consequences of self-injurious skin picking. The items assess avoidance behaviors (e.g., “I don’t look people in the eye because of my skin picking”), feelings of embarrassment and unattractiveness due to skin picking (“I feel embarrassed/unattractive due to my skin picking”), and behavioral sequelae of skin picking (“It takes me longer than others to get ready in the morning because of my skin picking”; “There are some things I can’t do due to my skin picking”). For each item, the impact of skin picking is rated on a 6-point scale ranging from none (0) to severe (5), with a total score ranging between 0 and 50. In a sample of clinically severe self-injurious skin pickers, the SPIS showed a high internal consistency as indicated by a Cronbach alpha of .93. The SPIS correlated moderately with measures of depression and anxiety, as well as self-reported intensity of shame following skin picking. Clinically severe self-injurious skin pickers obtained higher SPIS scores than individuals who did not meet criteria for self-injurious skin picking (clinically severe skin pickers’ mean = 27.54, $SD = 16.57$, range 1–50; nonclinical skin pickers’ mean = 1.23, $SD = 3.53$, range: 0–26). The SPIS exhibited moderate sensitivity and good specificity (Keuthen, Wilhelm, et al., 2001). An SPIS score of 7 best separated the groups of self-injurious versus nonclinical skin pickers.

Self-monitoring techniques can also be used to assess the frequency of skin-picking behavior. For example, Twohig and Woods (2001)
provided self-injurious skin pickers with monitoring cards that were carried throughout the day. Each time a patient engaged in skin picking, she/he placed a checkmark on the card. Using a multiple baseline design, this self-monitoring procedure was sensitive to changes in skin-picking frequency following a behavioral treatment.

**Treatment**

Several case series and randomized controlled trials have demonstrated the efficacy of selective serotonin reuptake inhibitors, including fluoxetine, fluvoxamine, sertraline, and paroxetine, for self-injurious skin picking (Arnold et al., 1999; Biondi, Arcangeli, & Petrucci, 2000; Bloch, Elliott, Thompson, & Koran, 2001; Gupta & Gupta, 1983; Kalivas, Kalivas, Gilman, & Hayden, 1996; Phillips & Taub, 1995; Simeon et al., 1997; Stout, 1990; Vittorio & Phillips, 1997). In a 10-week randomized, double-blind, placebo-controlled trial by Simeon and colleagues (1997), fluoxetine was significantly superior to placebo in reducing self-injurious skin picking. Results obtained by Bloch et al. (2001) suggest that fluoxetine may also serve as an effective maintenance treatment for this problem. In this study, after 6 weeks of open-label treatment with fluoxetine, patients were randomized to double-blinded fluoxetine or placebo. All patients who received placebo returned to pretreatment skin-picking levels. Patients treated with fluoxetine maintained clinically significant improvement. In addition, several case reports have documented successful treatments with doxepin (Harris, Sherertz, & Flowers, 1987), clomipramine (Gupta, Gupta, & Haberman, 1986), and naltrexone (Lienemann & Walker, 1989).

To our knowledge, there are only four case reports/series (Deckersbach et al., 2002; Kent & Drummond, 1989; Rosenbaum & Ayllon, 1981; Twohig & Woods, 2001) that show that self-injurious skin picking can be successfully treated with habit reversal. Rosenbaum and Ayllon (1981) reported successful treatment of 4 patients whose scratching behavior exacerbated their neurodermatitis, a skin condition in which itching from a minor infection or skin lesion leads to subsequent scratching to relieve the itching (Bar & Kuypers, 1973). Treatment components included self-monitoring, awareness training, and training in competing responses. To our knowledge, there are only four case reports/series (Deckersbach et al., 2002; Kent & Drummond, 1989; Rosenbaum & Ayllon, 1981; Twohig & Woods, 2001) that show that self-injurious skin picking can be successfully treated with habit reversal. Rosenbaum and Ayllon (1981) reported successful treatment of 4 patients whose scratching behavior exacerbated their neurodermatitis, a skin condition in which itching from a minor infection or skin lesion leads to subsequent scratching to relieve the itching (Bar & Kuypers, 1973). Treatment components included self-monitoring, awareness training, and training in competing responses. Following a single treatment session that included self-monitoring, awareness training, and competing responses, scratching was markedly reduced for three patients. For the 4th patient, skin picking decreased substantially 4 days after treatment. Results at 6-month follow-up showed that scratching was eliminated for the least severe patient, whereas the scratching behavior remained at low levels for the three other patients. It is possible that scratching associated with neurodermatitis may be inherently different from self-injurious skin picking with no obvious underlying dermatologic condition.

In a second report, Kent and Drummond (1989) used habit reversal techniques (i.e., self-monitoring, competing responses) to treat a...
patient who suffered from acne excoriée, a self-inflicted skin condition in which the sufferer has an urge to pick real or imagined acneiform lesions and that results in a worsening and spreading of the acne (Fruensgaard et al., 1978). As described by Kent and Drummond (1989), the patient persistently scratched her skin about 2 hours daily in the absence of a significant itch. Skin picking was reduced to 10 minutes daily following a month of applying habit reversal techniques, and the patient maintained her improvement at 4-month follow-up.

To our knowledge, two behavioral treatment case series have been published to date that included self-injurious skin pickers without an underlying dermatologic condition (Deckersbach et al., 2002; Twohig & Woods, 2001). Twohig and Woods demonstrated that habit reversal substantially reduced self-injurious skin picking in 2 male patients without comorbid psychiatric conditions who had experienced skin picking since childhood. Treatment consisted of a simplified habit reversal (Miltenberger, Fuqua, & Woods, 1998) implemented during an initial 1-hour session and additional half-hour sessions during the subsequent 2 to 3 weeks. Both patients experienced a substantial drop in daily skin picking as measured by a daily skin-picking count. Deckersbach and colleagues (2002) reported that self-injurious skin picking was substantially reduced in three patients with psychiatric comorbidity following a course of cognitive-behavioral therapy (CBT). Treatment included habit reversal techniques in conjunction with other CBT techniques (e.g., psychoeducation, cognitive restructuring). Those patients with psychiatric comorbidity or difficulties with emotion regulation may also require augmentation of habit reversal techniques with CBT techniques for affect modulation. Below we describe a patient with severe self-injurious skin picking occurring in the context of BDD. The frequency and intensity of self-injurious skin picking was reduced following selected habit reversal techniques coupled with other CBT interventions.

Case Report

A. R. was a divorced female in her mid-twenties who presented to the Massachusetts General Hospital OCD Clinic for evaluation and treatment of her chronic self-injurious skin picking. A. R.’s first memory of her picking dated back approximately 14 years. She recalled that she had become aware at that time of an increased number of clogged pores in her face, especially around her nose and chin. When it first started, she would try to unclog the pores with her fingers and fingernails by squeezing and rubbing. As a result, her skin became red and inflamed and she camouflaged the tissue damage with makeup. Over the next couple of weeks, A. R. remembered repeatedly trying to unclog pores, treating her reddened skin with alcohol and makeup. Although she describes that she was not particularly concerned about her appearance when the problem first developed, she increasingly found that “my face kept sticking more and more in my mind” and “drew me to the mirror to anxiously check on the status of my skin.” This typically resulted in yet another cycle of rubbing and squeezing the skin followed by the application of makeup. Over the next few months, the picking and covering up became a regular part of her morning and evening routines. Although, at that time, she often picked her skin until it bled, she described that she was too embarrassed to see a dermatologist. In public, she increasingly found herself being aware of her damaged skin. She reported noticing people “looking at my bad skin and my makeup,” which made her feel socially anxious and insecure. Before A. R. was evaluated for treatment, her skin picking had persisted since the initial episode, though the frequency and intensity waxed and waned over time.
When A. R. was first assessed, her psychiatric evaluation consisted of the Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) (First, Spitzer, Gibbon, & Williams, 1995), Keuthen and colleagues’ Skin Picking Inventory (SPS and the SPIS), and a functional assessment of her self-injurious skin picking. At the time of the psychiatric evaluation, A. R. was medication free and reported no previous treatment history for this problem. Her skin appeared healthy except for some minor skin imperfections (e.g., pimples and minor scars from previous picking episodes).

The Skin Picking Inventory and the functional assessment revealed that she picked mainly at facial sites, particularly the cheeks and her chin. The target of her skin picking mostly included clogged pores, pimples, scabs, and scars, as well as healthy skin. Skin-picking episodes often resulted in skin irregularities such as scars and reddened skin. Often these skin sequelae triggered subsequent skin picking. She typically used her fingers and fingernails but would also use tweezers when rubbing and squeezing were ineffective in opening clogged pores, pimples, or scabs. Skin-picking episodes typically ended when her skin was inflamed or bleeding.

Skin-picking episodes often occurred in the bathroom as part of her morning and evening grooming routine and also during other bathroom visits. As part of her grooming routine, she would typically check her face for pimples and scars in the mirror (“I am zooming in on these spots on my face”) and then squeeze and rub in an attempt to improve the appearance of her skin. She also described that she was constantly thinking about her “damaged” skin outside the bathroom (e.g., while sitting on the couch watching television). She often felt anxiously drawn to the mirror to check “how bad her skin looked,” which typically resulted in further skin picking. While skin picking was initially anxiety reducing, reddened or bleeding skin from skin picking typically triggered anxiety and the thought that she had “ruined” her skin. This was followed by feelings of intense shame and guilt, which in turn triggered attempts to cover up the damaged skin with makeup. Successful application of makeup often resulted in feelings of relief (“now it looks alright”) but also in a fear of how the skin looked beneath the makeup. This would trigger removal of her makeup to check on the status of her skin, which in turn often triggered the next skin-picking episode.

A. R. also reported that her skin picking had also become a method of regulating feelings such as frustration, sadness, or anxiety. For A. R., squeezing, rubbing, or scratching her skin (especially her chin) had a tension-reducing quality. She also reported being distracted and feeling mesmerized during these skin-picking episodes. Although these episodes rarely resulted in bleeding skin, they were typically followed by feelings of guilt and shame about having lost control. This often became a trigger for further skin picking.

A. R. also described habitual picking at home as well as in public (e.g., waiting for an appointment). She would all of a sudden notice herself rubbing her skin without being aware that she had initiated the picking. A. R. was unable to identify any particular feelings that preceded this habitual picking. Upon becoming aware of her skin picking in these public situations, A. R. usually felt very embarrassed. In addition, habitual skin-picking episodes at home often made her aware of skin irregularities (“bumps”), which resulted in mirror checking and further skin picking.

A. R. described being highly aware of her damaged skin at home and in public and felt constantly drawn to the mirror to check the status of her skin. Although at the time of evaluation, her skin looked healthy except for minor imperfections, she described feeling that she
looked awful with all these lesions and red skin due to her picking. In public she felt that people would stare and look at her skin and her thick makeup. This made her feel socially anxious and she would avoid public appearances at times.

At pretreatment, A. R. reported approximately 15 to 20 skin-picking episodes every day. Most skin-picking episodes were relatively short, not lasting longer than 5 minutes. Skin picking in front of the mirror occurred two to three times a day, with each episode usually lasting up to 30 minutes. Assessment with the SPS and SPIS yielded scores of 14 and 31, respectively. These scores reflect overall moderate severity of skin picking and moderate psychosocial impact from the behavior. The SPS indicated a moderate frequency and intensity of urges to pick her skin, extreme distress over skin picking, and moderate functional interference, with avoidance of social situations.

In addition, A. R. indicated severe dissatisfaction with her appearance (e.g., “I feel unattractive because of my skin picking”) on the SPIS. Psychiatric evaluation yielded a DSM-IV diagnosis of BDD, in addition to skin picking. BDD was diagnosed given that A. R. was preoccupied with the appearance of her “damaged” skin secondary to her skin picking despite the reality of only minor skin imperfections. No other psychiatric diagnoses were confirmed by the structured clinical interview.

CBT consisted of eight individual 60-minute weekly sessions. It included the following treatment components: (1) self-monitoring and awareness training, (2) competing response training, (3) psychoeducation, (4) perceptual retraining, (5) cognitive restructuring coupled with behavioral experiments, and (6) emotion regulation training. Based on the assumption that habitual skin picking could be quickly reduced by self-monitoring, awareness training, and competing responses, A. R. and the therapist decided to target habitual skin picking first. In the session, the therapist alerted A. R. whenever her arm moved to her chin or neck. With the help of the therapist, A. R. identified sensations associated with the arm movement (awareness training) and would use these sensations as early-warning signals for habitual skin picking. A. R. then moved her arm and hand away from her face and made a fist (competing response) whenever she became aware of arm movements to her face. In addition, A. R. also started a skin-picking diary, noting each time she picked her skin (self-monitoring). Immediately after catching herself picking, A. R. used an instant-replay technique to recall sensations involved when her hand/arm moved to her face, in order to use these sensations next time to catch herself earlier. In addition, A. R. used the skin-picking diary to identify situational triggers of habitual skin picking (e.g., being at home watching television) and then started applying the competing response described above.

Early in the treatment, A. R. was provided with psychoeducation about BDD. More specifically, this involved education about the difference between her actual appearance and her subjective body image. Education was provided as to how minor skin imperfections were magnified by “zooming into the mirror.” A. R. then practiced looking in the mirror from different distances (e.g., very close, farther away). She realized that she usually looked at her face a short distance from the mirror, and that during skin picking she usually was very close to the mirror to examine in detail the area she was picking (e.g., cheeks). Although this magnification facilitated her skin picking, A. R. realized that this also magnified her skin imperfections and contributed to the image of skin damage in her mind. In addition, A. R. also described that she tended to “zoom” into damaged spots in her face. Thus, she and her therapist practiced keeping a distance from the mirror and looking at the whole gestalt of the face (rather than details) and describing it in a neutral way (perceptual retraining). A. R. practiced this exercise at home.
Because going close to the mirror and checking on pimples and bumps was the typical starting point for skin-picking episodes associated with grooming, A. R. started keeping a distance from the mirror and practiced looking at the whole face during grooming routines.

Observing herself during grooming (e.g., applying moisturizer or makeup to her face), she also became aware of the tactile stimuli triggering skin-picking episodes during grooming. For example, she noticed that when she applied moisturizer or makeup, bumps in her skin would prompt an increased rubbing of that particular area (rather than of the cheeks as a whole), followed by squeezing and scratching of that skin area. A. R. learned to become aware of when she started to focus on a particular point in her face and bend her finger to rub or squeeze. She would then practice her competing response to prevent skin-picking behavior.

Given that A. R.’s skin picking was aimed at improving her appearance and that noticing pimples was anxiety producing, she was taught diaphragmatic breathing to help her tolerate the anxiety when performing competing responses (Otto, Pollack, & Barlow, 1995). In addition, A. R. decided to use a time-out procedure (leaving the bathroom for a few minutes) when the urge to pick her skin became overwhelming and she felt she could not resist it.

The initial assessment also revealed that A. R. frequently went to the bathroom to check her face in the mirror during the day. She and her therapist decided to limit time in front of the mirror to morning and evening grooming as well as prior to leaving the house (stimulus control and response prevention). Instead, when A. R. felt the urge to check her face in the mirror, she used diaphragmatic breathing and relaxation techniques to modulate the urge and would leave the house to go for a walk when the urge became overwhelming (emotion regulation techniques).

A. R. also learned to identify and challenge BDD-related distorted thoughts that stuck in her mind and made her anxious when she refrained from skin picking. These cognitions often triggered going to the bathroom, mirror checking, and picking her skin (e.g., “My face looks horrible under the makeup”). A. R. and her therapist used thought records in order to question the validity of these thoughts (Allen & Hollander, 2000; Beck, 1995). A. R. also surveyed others, regarding how they perceived her face. Contrary to her predictions (behavioral experiment), other people generally did not notice any skin imperfections, and in general found her face attractive. Emotion regulation techniques were also used, since A. R.’s skin-picking episodes were also triggered by, and served to regulate, feelings such as frustration. These techniques included diaphragmatic breathing and relaxation exercises, as well as other techniques such as calling a friend to talk about her frustration, or having a glass of lemonade to distract herself. These tools helped her to better tolerate frustration or feelings of anxiety.

Over the course of treatment, the frequency of habitual skin picking decreased first, followed by improvements in emotion-regulation skin-picking episodes. Those skin-picking episodes associated with grooming and attempts to improve appearance decreased the most slowly. Although A. R. could recognize when skin picking started, at first she had difficulty stopping herself (“I just could not resist”). She indicated that diaphragmatic breathing and time out helped her to interrupt the picking. She also described that they helped her to take a step back from the mirror to put things in perspective. In the beginning, A. R. said that refraining from skin picking made her face and pimples stick in her mind. This made her initially very anxious. After a while, the thoughts about her face typically went away. Over the course of the treatment, A. R. noticed that when refraining from skin picking, thoughts about her face went away faster and caused less anxiety. After seven ses-
sions, A. R. reported fewer than three skin-picking episodes per day (each less than one minute duration). Her urge to pick her skin in front of the mirror had substantially decreased. Her SPS score had dropped by greater than 50%, and her SPIS score had dropped by 45%. At that time, she moved to a different town and could not come in for regular treatment. Her improvement remained stable as determined by a follow-up visit 3 months after the end of active treatment.

Discussion

Self-injurious skin picking is clinically characterized by its behavioral heterogeneity. Although it is a ritualistic behavior, it has been described as both a compulsive behavior in the context of OCD (Neziroglu & Mancebo, 2001) and an intentionally executed behavior used to regulate feelings such as tension, nervousness, and frustration (Deckersbach et al., 2002). In addition, it can be habitlike, occurring (at least in the beginning) largely outside an individual’s awareness (Arnold et al., 1998; Deckersbach et al., 2002). Psychiatric comorbid conditions include obsessive-compulsive spectrum disorders (such as OCD, BDD, and trichotillomania), disorders of impulse control, and disorders characterized by difficulties in emotion regulation (e.g., trichotillomania, borderline personality disorder).

Our case example illustrates reduced skin picking in a patient with moderately severe self-injurious skin picking and BDD. Improvement occurred following selected habit reversal techniques coupled with traditional elements of CBT. This outcome is consistent with previous case reports/series that also described reduced skin picking following brief treatment with habit reversal or CBT that included some habit reversal techniques (Deckersbach et al., 2002; Kent & Drummond, 1989; Rosenbaum and Ayl-lon, 1981; Twohig & Woods, 2001). The patient described above exhibited skin picking as an attempt to improve appearance as well as to regulate feelings, and also as a habit. Our anecdotal impression is that skin picking as a habit responds more quickly to behavioral treatment than does skin picking designed to regulate intense emotions. This is consistent with recent findings in trichotillomania suggesting that individuals with predominantly habitlike hairpulling respond better to behavior therapy than patients with predominantly emotion-regulating hairpulling (Keuthen, Deckersbach, Bromley, Baer, & Jenike, 2001). Of note, though, is that this case report and previous others illustrate that patients can respond to CBT despite a long history of self-injurious skin picking and psychiatric comorbidity.

In summary, CBT offers promising strategies for the effective treatment of self-injurious skin picking. However, further, controlled studies are needed to draw conclusions about CBT’s efficacy/effectiveness as well as factors that may modulate treatment efficacy (such as the type of skin picking, chronicity, or comorbid conditions).

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