Characteristics of 34 Adults With Psychogenic Excoriation

Lesley M. Arnold, M.D.; Susan L. McElroy, M.D.; Diya F. Mutasim, M.D.; Megan M. Dwight, M.D.; Cindy L. Lamerson, M.D.; and Emily M. Morris

Background: Psychogenic excoriation, characterized by excessive scratching or picking of the skin, is not yet recognized as a symptom of a distinct DSM-IV disorder. The purpose of this study was to provide data regarding the demographics, phenomenology, course of illness, associated psychiatric comorbidity, and family history of subjects with psychogenic excoriation.

Method: Thirty-four consecutive subjects were recruited from an outpatient dermatology practice and by advertisement. Subjects completed the Structured Clinical Interview for DSM-IV augmented with impulse control disorder modules, the Yale-Brown Obsessive Compulsive Scale, and a semistructured interview for family history, demographic data, and clinical features.

Results: Most subjects were women who described a mean age at onset of 38 years and a chronic course. Subjects excoriated multiple sites, most frequently the face. The behavior caused substantial distress and dysfunction. All 34 subjects met criteria for at least 1 comorbid psychiatric disorder, with a mood disorder the most common. Family histories were notable for depressive disorders and psychoactive substance use disorders. Most subjects experienced both mounting tension before excoriation and relief after excoriation as in impulse control disorders. A minority of subjects excoriated skin as part of obsessive-compulsive disorder. Body dysmorphic disorder with preoccupation about the skin's appearance precipitated excoriation in about a third of subjects.

Conclusion: Psychogenic excoriation is chronic, involves multiple sites, and is associated with a high rate of psychiatric comorbidity. The behavior associated with the excoriation is heterogeneous and spans a compulsive-impulsive spectrum. Most subjects in this sample described features of an impulse control disorder.

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Reprint requests to: Lesley M. Arnold, M.D., P.O. Box 670559, University of Cincinnati Medical Center, Cincinnati, OH 45267-0559.

Psychogenic excoriation (also called neurotic excoriation, pathological or compulsive skin picking, and dermatotillomania) is characterized by excessive scratching, picking, gouging, or squeezing of otherwise healthy skin. The excoriation may also occur in response to an itch or other skin sensation or to remove a lesion on the skin (e.g., acne). In contrast to patients with the factitious disorder dermatitis artefacta, patients with psychogenic excoriation acknowledge the self-inflicted nature of the excoriations. Excoriations are typically found in areas that the patient can easily reach, such as the face, scalp, upper back, abdomen, and the upper and lower extremities; are a few millimeters in diameter; and are weeping, crusted, or scarred with occasional postinflammatory hypopigmentation or hyperpigmentation.[1] Psychogenic excoriation occurs in about 2% of dermatology clinic patients, predominately women, whose mean age at onset is between 30 and 40 years. The mean duration of symptoms is 5 years.[2]

Psychogenic excoriation is not yet recognized as a distinct psychiatric disorder classified in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV). Case studies suggest that psychogenic excoriation is an obsessive-compulsive spectrum disorder, and there are reports of its response to treatment with serotonin reuptake inhibitors (SRIs).[3–9] The purpose of the present study was to provide a more detailed picture of the demographic and phenomenologic characteristics of patients with psychogenic excoriation and to assess psychiatric comorbidity using a structured clinical interview.

METHOD

Subjects were recruited from the dermatology clinical outpatient practice at the University of Cincinnati Medical Center and from advertisement for a study of adults with excessive scratching, picking, rubbing, popping, or washing of the skin; hair pulling and picking the nails; or excessive concerns about the skin. Thirty-nine potential subjects were identified. Two of these subjects were excluded from the study because each met DSM-IV criteria for delusional disorder, somatic type (delusions of parasitosis), and 2 others were excluded because they had only trichotillomania. Thirty-five subjects met the inclusion criteria of 18 years of age or older and the diagnosis of psychogenic excoriation after exclusion of the other

Figure 1. Age at Onset of Psychogenic Excoriation in 34 Subjects

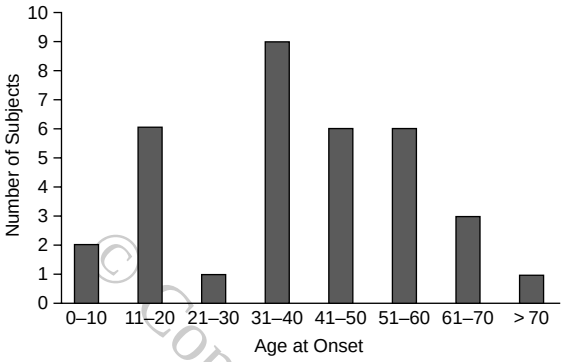

Table 1. Location of Skin Excoriation in 34 Subjects With Psychogenic Excoriation*

Site	N	%
Face	17	50
Arms	16	47
Legs	10	29
Neck	9	26
Scalp	8	24
Nails/cuticles	7	21
Back	6	18
Shoulder	5	15
Genitals	4	12
Abdomen	4	12
Chest	3	9
Buttocks	3	9
Hand	2	6

*Twenty-eight subjects (82%) excoriated multiple sites.

causes of pruritus and secondary excoriation. One subject did not complete the evaluation and was excluded from analysis. Of the remaining 34 subjects, 27 were referred from the dermatology clinical outpatient practice at the University of Cincinnati and 7 responded to the advertisement and were subsequently sent to the University of Cincinnati for dermatologic evaluation.

After dermatologic evaluation and provision of written informed consent, subjects underwent psychiatric evaluation with the Structured Clinical Interview for DSM-IV,[10] augmented with modules for impulse control disorders including intermittent explosive disorder, pathologic gambling, pyromania, trichotillomania, compulsive buying, and kleptomania. Data on demographic and clinical features were obtained by semistructured interview. Family history of any psychiatric disorder in first-degree relatives was determined in a semistructured interview via the family history method.[11] Subjects also completed the Yale-Brown Obsessive Compulsive Scale (Y-BOCS)[12] modified for psychogenic excoriation. The modified Y-BOCS is a 10-question semistructured clinician-administered scale that assesses the severity of psychogenic excoriations in the previous week. The scale measures preoccupation with skin (time occupied, interference with functioning due to preoccupation, distress, resistance to preoccupation, and control over preoccupation) and associated behaviors related to the skin (time spent, interference with functioning, distress associated with restraint, resistance to behaviors, and control over behaviors). Possible scores range from 0 (absence of preoccupation/associated behaviors) to a maximum of 40 (incapacitating preoccupation/associated behaviors). Three additional questions measuring impulsive symptoms (tension with urge to perform behaviors, release of tension with completion of behaviors, and feelings of comfort or pleasure with behaviors) were appended to the Y-BOCS but not included in the final score. The obsessive and compulsive scores of the Y-BOCS were analyzed using the 2-tailed Student t test. All subjects were seen between August 1995 and May 1997. The SCID evaluations were completed by L.M.A. and M.M.D. (k = 0.72).

RESULTS

Thirty-two women and 2 men with psychogenic excoriation were studied. The age of the subjects at the time of presentation ranged from 19 to 82 years (mean ± SD = 46.4 ± 15.6 years). The sample included 25 white and 9 African American subjects. Eleven (32%) of the subjects were single, 10 (29%) were married, 8 (24%) were divorced, 4 (12%) were widowed, and 1 (3%) was separated. Nine (26%) did not complete high school, 5 (15%) had a high school education or a General Equivalency Diploma, 8 (24%) had some college education, 5 (15%) had college degrees, 4 (12%) had completed vocational training, 1 (3%) had some graduate work, and 2 (6%) had graduate degrees.

The reported age at onset of psychogenic excoriation varied from 3 years to 82 years (Figure 1); the mean ± SD age at onset was 38 ± 19 years; the mean duration of excoriation was 8 ± 10 years with a range of 3 months to 33 years.

Twenty-eight subjects (82%) excoriated multiple sites. The mean ± SD number of sites excoriated was 2.8 ± 1.6. Table 1 shows the number of subjects who excoriated skin from specific sites during the course of their disorder. One subject also pulled hair from her face, and 2 other subjects pulled scalp hairs. Two subjects also bit their nails excessively. Seven subjects excoriated acne. Severity of skin lesions varied from excoriated acneiform cysts to frank ulcers necessitating plastic surgery. One subject had torn at the skin on the dorsum of her hands so severely that her doctors considered amputation. Twenty-three (68%) subjects resorted to cosmetics and/or clothing to camouflage their lesions, and 19 (56%) frequently checked themselves in mirrors. As a result of the excoriation, 15 (44%) withdrew socially and 6 (18%) confined themselves to their homes for most of the time. Eleven (32%) reported

secondary problems of infection or scarring. Fifteen (44%) spent, on average, less than 1 hour a day excoriating the skin, 9 (26%) spent 1 to 3 hours a day, 5 (15%) spent 3 to 8 hours a day, and 5 (15%) spent greater than 8 hours a day excoriating the skin. All subjects used their fingernails to excoriate the skin, and 6 (18%) also reported using instruments (tweezers, nail files, pins, or knives) on the skin.

The majority of subjects (N = 29, 85%) reported skin sensations related to the excoriation. The most common skin sensation was pruritus (N = 24, 83%), although many subjects (N = 21, 72%) also reported other sensations including burning, crawling, tingling, warmth, prickling, dryness, and pain. Of the 20 subjects (59%) who described primary excoriation (i.e., excoriation not initially preceded by skin sensations), 15 developed secondary disturbing skin sensations that sometimes led to more excoriation. Excoriation in 9 subjects (26%) with primary pruritus (i.e., pruritus that occurred prior to any excoriation) was not precipitated by skin sensations. Five subjects (15%) had primary pruritus with all excoriation initiated by skin sensations.

Of the 28 subjects who reported any excoriation not precipitated by skin sensations, 22 (79%) reported an increasing sense of tension before excoriating the skin; 22 (79%) reported a sense of relief, pleasure, or gratification immediately after excoriating the skin; and 19 (68%) acknowledged both of these characteristics. Most of the 34 subjects (N = 32, 94%) viewed the skin excoriation as excessive; however, 2 subjects remained convinced that picking at lesions was necessary for healing. Twenty-five (74%) of the 34 subjects actively attempted to resist skin excoriation, applying a variety of techniques including wearing gloves, keeping hands occupied, keeping busy, covering skin with bandages, applying creams or ice packs, keeping nails short, telling self to "stop," application of make-up, snapping a rubber band on the wrist, or hitting skin lesions with a ruler.

No subject reported that the skin excoriation always occurred without full awareness, but 26 (76%) said that the excoriation sometimes occurred automatically (i.e., they found themselves acting). Four subjects (12%) reported that the excoriation occurred when they were involved in sedentary activities such as watching TV, reading, doing crosswords, talking on the phone, or driving. Twenty-five subjects (74%) described a worsening of excoriation in the evening, and 3 subjects (9%) excoriated more in the morning after awakening. Eight (24%) noted worsening when they were less active, tired, relaxed, or bored. Six (18%) tended to pick the skin when thinking of something stressful.

Fifteen subjects (44%) reported that, in addition to picking the skin automatically, roughness, "scabs," or "bumps" on the skin's surface triggered excoriation. Four of the 15 subjects worked to get a substance out of the skin. Eleven of these 15 subjects also reported a preoccupation with the skin's appearance and texture, describing a desire to have "smooth" or "flawless" skin. Their picking was in part an attempt to improve the appearance and texture of the skin, but all were aware that the excoriation was making the skin condition worse. All 11 subjects' preoccupation with the skin's appearance was excessive and distressful, meeting DSM-IV criteria for body dysmorphic disorder.

Table 2. Primary DSM-IV Psychiatric Diagnoses of 34 Subjects With Psychogenic Excoriation

Diagnosis	N	%
Undifferentiated somatoform disorder[a]	14	41
Body dysmorphic disorder	11	32
Impulse control disorder NOS	7	21
Obsessive-compulsive disorder	2	6

[a]Primary pruritus.

Five subjects (15%) had preoccupations about contamination of the skin either by "germs" or infection, and 1 of the 5 subjects was also concerned about chemical exposure from insecticide and infestation with fleas. All 5 washed the skin repeatedly in response to the concerns about contamination in addition to excoriating the skin. The preoccupations and behaviors met criteria for obsessive-compulsive disorder. One other subject (3%) was convinced that she had to pick a ring around a skin lesion in order for it to heal. She also met criteria for obsessive-compulsive disorder (OCD) and had other comorbid OCD symptoms involving contamination and a need for symmetry.

Table 2 summarizes the primary DSM-IV psychiatric diagnoses of the 34 subjects based on the phenomenology of their skin-related symptoms and behaviors. The criteria for impulse control disorder not otherwise specified (ICD NOS) were recurrent, distressful skin excoriation; an increasing sense of tension immediately before excoriation; and/or pleasure, gratification, or relief when excoriating the skin. Although Table 2 lists the primary psychiatric diagnoses based on the skin-related symptoms and behaviors, many subjects had both obsessive-compulsive and impulse control disorder symptoms. Two subjects had features of both OCD and ICD NOS. All 11 subjects with body dysmorphic disorder also had symptoms that met criteria for ICD NOS. Nine of the 14 subjects with undifferentiated somatoform disorder also developed compulsive-impulsive behaviors that were independent of the pruritus. Six of these 9 subjects were diagnosed with ICD NOS, 1 had OCD, and 2 had both OCD and ICD NOS. Another subject with undifferentiated somatoform disorder developed hypochondriasis with an unfounded fear of cancer causing the pruritus. The majority of subjects (N = 27, 79%) had features of an impulse control disorder.

Of the 34 subjects' Y-BOCS assessments, the mean obsessive score (6.1 ± 5.3) was significantly lower than the

Table 3. Current and Lifetime Comorbid DSM-IV SCID Diagnoses of 34 Subjects With Psychogenic Excoriation

	Current		Lifetime	
Diagnosis	N	%	N	%
Mood disorders	23	68	27	79
Bipolar disorder I	3	9	3	9
Bipolar disorder II	9	26	9	26
Major depression	8	24	13	38
Dysthymia	4	12	4	12
Mood GMC[a]	1	3	1	3
Psychotic disorders	1	3	1	3
Schizophrenia	0	0	0	0
Schizoaffective disorder	0	0	0	0
Delusional disorder	0	0	0	0
Psychotic disorder NOS	1	3	1	3
Psychoactive substance use disorders (abuse or dependence)	4	12	13	38
Alcohol	3	9	10	29
Other	2	6	5	15
Anxiety disorders	14	41	19	56
Panic disorder	2	6	7	21
Agoraphobia without panic	1	3	1	3
Social phobia	5	15	5	15
Specific phobia	5	15	7	21
Obsessive-compulsive disorder[b]	2	6	2	6
Posttraumatic stress disorder	3	9	5	15
Generalized anxiety disorder	7	21	7	21
Somatoform disorders[b]	7	21	7	21
Somatization disorder	0	0	0	0
Pain disorder	2	6	2	6
Undifferentiated somatoform disorder	0	0	0	0
Hypochondriasis	2	6	2	6
Body dysmorphic disorder	3	9	3	9
Eating disorders	4	12	7	21
Anorexia nervosa	0	0	0	0
Bulimia nervosa	1	3	1	3
Binge eating disorder	2	6	5	15
Eating disorder NOS[c]	1	3	1	3
Adjustment disorder	3	9	3	9
Impulse control disorders[b]	3	9	5	15
Trichotillomania	2	6	3	9
Impulse control disorder NOS[d]	1	3	2	6
Other impulse control disorders[e]	0	0	0	0

[a]Mood disorder due to a general medical condition.
[b]Not skin-related.
[c]Purging without binges.
[d]Compulsive buying.
[e]Intermittent explosive disorder, kleptomania, pyromania, pathological gambling.

Table 4. Psychiatric Disorders in the First-Degree Relatives of 34 Subjects With Psychogenic Excoriation

	Relatives Affected (N = 56)	
Disorder	N	%
Mood disorders		
Bipolar disorder	3	5
Major depression	14	25
Psychotic disorders	0	0
Psychoactive substance use disorders		
Alcohol	21	38
Other	7	13
Anxiety disorders		
Panic disorder	3	5
Obsessive-compulsive disorder	0	0
Somatoform disorders		
Hypochondriasis	1	2
Eating disorders		
Anorexia nervosa	0	0
Bulimia nervosa	1	2
Binge eating disorder	0	0
Impulse control disorders		
Pathological gambling	1	2
Trichotillomania	0	0
Attention deficit hyperactivity disorder	4	7

mean compulsive score (9.4 ± 4.2) at $p = .006$, and the mean total score was 15.5 ± 9.0 of a possible 40 points.

All 34 subjects met the DSM-IV criteria for at least 1 comorbid psychiatric disorder, with a mood disorder the most common (79%, N = 27) (Table 3). The onset of the mood disorder preceded the onset of the skin excoriation by at least 1 year in 20 subjects (59%), occurred in the same year in 3 (9%) and followed it in 4 (12%). Eighteen subjects (53%) noted a relationship between depression and a worsening of excoriation. Four subjects (12%) had suicidal ideation because of the skin-related symptoms. Fourteen subjects (41%) noted a relationship between anxiety and a worsening of excoriation. Seven of these 14 subjects also reported that depression worsened the behavior. Most of the subjects with psychoactive substance use disorders did not report a connection between substance use and excoriation, but 2 subjects noted that alcohol or benzodiazepines decreased the severity of the excoriation and 1 subject experienced worsening of the behavior with alcohol and marijuana use. Although not obtained by interview with a SCID module, a past history of attention-deficit/hyperactivity disorder (ADHD) was reported by 1 subject, and 2 subjects met current DSM-IV criteria for ADHD.

A history of psychiatric disorders was found in 56 (20%) of 279 first-degree relatives (Table 4). Mood disorders and psychoactive substance use disorders were the most common disorders in the families. One subject reported psychogenic excoriation in her mother.

DISCUSSION

This study assessed the characteristics of 34 adults with psychogenic excoriation. The mean age at onset was the late 30s, as has been noted in other studies.[2] Most of the subjects in this sample were women, consistent with other reports that psychogenic excoriation appears to be more common in women.[2,9] Subjects excoriated skin from multiple sites, but the most common site was the face. The disorder caused substantial distress in the subjects with more than half experiencing impairment in social functioning and about a third developing medical complications, some severe enough to warrant surgery. The Y-BOCS score revealed mild-moderate severity of symptoms with significantly more behavioral symptoms than preoccupations. Validation of the Y-BOCS as a measure of the severity of psychogenic excoriation is needed.

A minority of subjects excoriated only in response to skin sensation, most commonly pruritus. The presence of

skin sensations initiated an "itch-scratch" cycle in some subjects as described in the dermatology literature.[13] It is unclear if those subjects who excessively excoriated the skin only in response to skin sensations represented a different clinical problem. A study with more subjects is needed to answer this question.

The characteristics of this group of subjects with psychogenic excoriation were similar to descriptions of trichotillomania in several ways,[14] although these features are not specific to trichotillomania. There was a predominance of women in the clinical samples and a chronic course in both conditions. Psychogenic excoriation appeared to have a later mean age at onset than trichotillomania, but there was a wide range of age at onset, and other studies have noted a younger mean age at onset for skin picking.[9] The subjects had similar comorbid Axis I disorders as has been reported for trichotillomania, including mood disorders, anxiety disorders, alcohol or drug abuse, and eating disorders.[14,15] Our findings of family histories with high frequencies of depressive disorders and psychoactive substance use disorders were similar to the findings in a survey of hair pullers, although subjects with trichotillomania also had family members with OCD.[16] The family history method used in the present study underestimates the amount of illness among first-degree relatives,[11] and family studies are needed to confirm the findings and to determine if other diagnoses, like OCD, are also found in the first-degree relatives of patients with psychogenic excoriation.

Psychogenic excoriation, like trichotillomania, has many features of impulse control disorders. As in the hair pulling behavior of trichotillomania, most subjects experienced both mounting tension before excoriation and gratification or relief after the excoriation. Most subjects also excoriated the skin automatically or while doing sedentary activities. Although bipolar disorder was diagnosed in 3% to 5% of subjects with trichotillomania,[14,16] it was noted in 35% of the subjects with psychogenic excoriation. Confirmation of this finding is needed with control subjects, but the high frequency of bipolar disorder in the group is consistent with the observation that impulse control disorders may have a strong association with bipolar disorder.[17,18]

Psychogenic excoriation also has features of obsessive-compulsive disorder, as has been noted in trichotillomania.[16,19] In 60 adult chronic hair pullers, 17% of subjects did not meet the DSM-III-R criteria for both mounting tension and relief after pulling, 33% had obsessions and/or compulsions, and 15% met criteria for past or present OCD.[14] Similarly, the behavior in psychogenic excoriation often had compulsive features, and not all subjects with psychogenic excoriation had both mounting tension and relief with the behavior. Subjects with psychogenic excoriation had comorbid mood, anxiety, and substance use disorders as reported for patients with OCD.[20] Interestingly, many subjects described a preoccupation with the skin appearance and texture, and excoriated the skin to remove roughness or bumps. About a third of subjects had body dysmorphic disorder as a result of the excessive concern about the skin appearance. This is consistent with the finding that skin picking is associated with body dysmorphic disorder.[7]

The behavior associated with psychogenic excoriation is therefore heterogenous and spans a compulsivity-impulsivity spectrum.[17,21] The majority of subjects have both impulsive and compulsive features, as has been noted in trichotillomania.[22] This may have important treatment implications as the presenting phenomenology may predict pharmacologic responsiveness.

There have been few studies examining the response of patients with psychogenic excoriation to psychiatric treatment. Case studies, open trials, and 1 double-blind study have demonstrated the efficacy of SRIs in psychogenic excoriation.[3–9] This is in contrast to the mixed response of trichotillomania to SRIs.[23–25] More studies are needed to confirm the responsiveness of psychogenic excoriation to SRIs and to determine if the presence of compulsive and/or impulsive features predicts treatment response. It may be that those with more compulsive features respond to SRIs, and those with impulsive features respond to a wider range of antidepressants or mood stabilizers.[17] It will also be important to assess how comorbid conditions such as bipolar disorder affect treatment response.

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