A Double-Blind Trial of Fluoxetine in Pathologic Skin Picking

Daphne Simeon, M.D., Dan J. Stein, M.B., Shira Gross, Nazrul Islam, M.B., James Schmeidler, Ph.D., and Eric Hollander, M.D.

Background: Our objective was to determine the efficacy of fluoxetine in the treatment of pathologic skin picking in a double-blind, placebo-controlled, parallel trial.

Method: Twenty-one adults with chronic pathologic skin picking agreed to participate and received 10 weeks of placebo or fluoxetine with a flexible dosing schedule up to 80 mg/day. Three skin-picking measures were employed: the Clinical Global Impression-Improvement (CGI-I) scale, the Skin Picking Treatment Scale (SPTS), and a visual analog scale of self-rated change (VAS). In addition, depression, anxiety, and obsessions-compulsions were rated using the Hamilton Rating Scale for Depression (HAM-D), the Hamilton Rating Scale for Anxiety (HAM-A), the Spielberger State-Trait Anxiety Inventory (STAI), and the Yale-Brown Obsessive Compulsive Scale (Y-BOCS) for the duration of the study.

Results: Seventeen subjects (6 treated with fluoxetine and 11 treated with placebo) completed the trial, at a mean fluoxetine dose of 55 mg/day. Fluoxetine was significantly superior to placebo in the treatment of skin picking according to two of the three measures for the completer analysis and to one of the three measures for the intent-to-treat analysis. Neither baseline level nor change in depression, anxiety, or obsessive-compulsive symptoms was significantly related to change in skin picking.

Conclusion: This first controlled trial of the treatment of pathologic skin picking suggests that fluoxetine may be of therapeutic benefit. Larger controlled studies are warranted.

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Reprint requests to: Daphne Simeon, M.D., Psychiatry Box #1230, Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029.

Pathologic skin picking has received little attention in the psychiatric literature.[1,2] This condition is defined as the habitual picking of skin lesions, which when chronic and extensive can lead to significant distress, dysfunction, and disfigurement. The skin lesions can range from an underlying skin condition such as acne or eczema to wounds, scabs, insect bites, or frequently benign and barely noticeable irregularities of the skin. An itching sensation or an uncontrollable urge to pick at the skin may or may not precede the behavior. Skin picking has received more attention in the dermatologic literature, in which the term *neurotic excoriations* is commonly used.[1,3–6] While the incidence of skin picking among dermatology clinic patients has been estimated at 2%, the incidence in psychiatric populations and in the general population is unknown.[1] Skin picking tends to occur primarily in younger women in their 20s and 30s,[3,5] although onset of picking in the 50s and 60s has also been described.[1] Patients often seek dermatologic treatments, such as antibiotics, antihistamines, steroid creams, abrasions, bleaching, and chemical peels,[1,3,7] that comprise temporarily effective measures that leave the underlying problem untreated.

Conceptualizing skin picking as a psychiatric problem has been hindered in part by lack of a formal diagnostic classification. Although it commonly co-occurs with phenomenologically similar behaviors such as hair pulling,[8,9] it is not included in the DSM-IV impulse control disorders. In addition, "self-mutilation" or "self-injurious behavior" is often not conceptualized broadly enough to encompass these types of compulsive, habitual behaviors[10] and is reserved for behaviors such as cutting and burning. Dermatologists who specialize in psychocutaneous illness have described skin picking either as an obsessive-compulsive behavior[6,11] or as a more nonspecific depressive, anxious, or psychotic manifestation.[12] As observed with hair pulling and nail biting, similarities have been described between skin picking and obsessive-compulsive disorder, and it has been proposed that skin picking be viewed as an obsessive-compulsive related disorder.[2] Some authors have proposed that behaviors such as hair pulling and skin picking may be rituals secondary to body dysmorphic disorder,[13,14] while others have found no body dysmorphic concerns in these patients.[15,16] Nonetheless, it is clear that if severe enough,

skin picking can be a serious psychiatric problem that can lead to distressing feelings of shame, lack of control, and low self-esteem, as well as to social avoidance, occupational impairment, and permanent disfigurement.

No effective treatment has been established in either the dermatologic or psychiatric literature. Studies of psychotherapeutic interventions, whether dynamically oriented, eclectic or behavioral, or brief or long-term, have all been uncontrolled and have yielded mixed results.[17–21] Although there is no established pharmacologic treatment for skin picking, the literature suggests that serotonin reuptake inhibitors (SRIs) may be of benefit. Three case reports describe a total of four young women whose skin picking responded to treatment with fluoxetine.[22–24] In a series of approximately 30 patients with neurotic excoriations or acne excoriée treated openly with sertraline, 68% showed significant improvement.[25] Another report describes an older woman whose neurotic excoriations responded to clomipramine.[1] In a retrospective treatment review, approximately half of 33 subjects with skin picking secondary to body dysmorphic disorder reported significant improvement with SRIs.[13] All these reports are consistent with the superiority of clomipramine over desipramine in related conditions such as hair pulling[26] and nail biting,[27] although two other studies failed to show fluoxetine to be superior to placebo for hair pulling.[28,29] Finally, in a different psychiatric population suffering from the Prader-Willi syndrome, in which skin picking comprises a hallmark symptom,[30] serotonergic dysregulation has been proposed.[31] Cases responding to fluoxetine have been described in this population,[32] although a double-blind trial of fenfluramine, which differs in its serotonergic actions from SSRIs, yielded negative results.[33]

With this background, we postulated that pathologic skin picking may respond to an SRI. We thus conducted a 10-week, double-blind, parallel study of fluoxetine versus placebo in pathologic skin picking, hypothesizing that fluoxetine would be superior to placebo treatment. We also hypothesized that improvement in skin picking would be independent of change in other psychopathology such as anxiety, depression, or obsessive-compulsive symptoms.

METHOD

Subjects

Subjects were recruited for this study through newspaper advertisements and mailings to area clinics and practitioners asking them to refer indivduals who might need treatment for problems with skin picking. All subjects were at least 18 years of age and gave written informed consent prior to their participation in the study. The inclusion criterion was chronic skin picking of at least 6 months' duration that was severe enough to lead to observable skin lesions and to cause significant emotional distress or impairment in functioning. In addition, to be able to detect treatment change, a minimum of one episode per week in the month prior to starting treatment was required. In effect, most subjects had suffered from pathologic skin picking for years and engaged in frequent episodes of the behavior.

Patients were excluded from the study if they suffered from a major medical or neurologic disorder, including any history of seizures. All subjects underwent a physical examination and a routine laboratory evaluation (hematology, routine chemistry, thyroid function, and urine pregnancy testing and urinalysis) to enter the study.

A comprehensive psychiatric evaluation was conducted at baseline, which included a semistructured clinical interview with a psychiatrist (D.S.) to collect detailed information on skin picking, as well as the Structured Clinical Interview for DSM-III-R Patient Version (SCID-P) with the psychotic screen adapted to assess lifetime dysthymia and generalized anxiety disorder.[34] Psychiatric exclusion criteria were mental retardation, lifetime psychotic or bipolar illness, current (past month) substance abuse or dependence, and current (past month) eating disorder. Subjects were also excluded if their skin picking was of a delusional or factitious nature, such as in delusional parasitosis or dermatitis artefacta, or comprised a ritual driven by obsessional concerns characteristic of body dysmorphic disorder or obsessive-compulsive disorder. Subjects with lifetime or current anxiety and depressive disorders were not excluded. Subjects receiving any current psychotropic medications were excluded, as were subjects who had received trials of fluoxetine in the past. In addition, no subject could be in cognitive-behavioral therapy nor have started or terminated long-term psychotherapy within 3 months of participation in the study.

The trial consisted of a 10-week, double-blind treatment with either fluoxetine or placebo. Subjects were randomized to fluoxetine or placebo, dispensed in identical capsules and packaging. Given the episodic variability characteristic of skin-picking behavior, we did not conduct a 1- or 2-week placebo run-in phase. Dosing was started at 20 mg/day during the first week and was increased by 20 mg/day every week over the subsequent 3 weeks to a maximum dose of 80 mg/day. Subjects whose dose was increased but who could not tolerate the increase because of side effects were then decreased to their prior dose within 1 week of the increase; no subsequent dose increases were attempted. The maximum dose reached by the end of the fourth week (20–80 mg/day) was then maintained constant over the subsequent 6 weeks of the trial.

Rating Scales

Subjects were seen weekly for the first 4 weeks of the trial while the medication dose was being increased, and every 2 weeks subsequently. Three ratings of skin picking were conducted at each visit: (1) the Clinical Glo-

bal Impression-Improvement (CGI-I) scale,[35] a standard clinician-rated 7-point global change scale (7 = very much worse, 6 = much worse, 5 = slightly worse, 4 = no change, 3 = slightly better, 2 = much better, 1 = very much better), applied to skin picking; (2) a 100-mm visual analog scale (VAS) ranging from no improvement/worsening (0 mm) to complete remission (100 mm), on which subjects were asked to self-rate change in skin-picking behavior; and (3) the 5-item clinician-rated Skin Picking Treatment Scale (SPTS), consisting of intensity of urge to pick, frequency/duration of picking, severity of picking, control over the behavior, and interference with functioning, each rated on an operationally defined 0–4 scale (total score 0–20) (available from the authors upon request). This scale was closely patterned after scales previously used in the literature for rating hair pulling and nail biting,[26,27,36] as well as after the Yale-Brown Obsessive Compulsive Scale (Y-BOCS),[37] which has been widely replicated and validated in measuring obsessive-compulsive disorder (OCD). In addition to skin-picking ratings, all subjects received every other week the 24-item Hamilton Rating Scale for Depression (HAM-D),[38] the Hamilton Rating Scale for Anxiety (HAM-A),[39] the Spielberger State-Trait Anxiety Inventory (STAI),[40] and the Y-BOCS. To maximize the accuracy of the ratings, subjects were asked to monitor their skin-picking behavior and to keep a written or mental diary of the frequency, severity, and duration of episodes. Other than self-monitoring, no other cognitive instructions were given. Given the episodic variability in skin picking, baseline (Week 0) ratings were based on the entire month immediately prior to starting the trial.

Statistical Analysis

Baseline measures of demographic and clinical variables in the fluoxetine and placebo groups were compared by Student's t tests. Endpoint analyses were conducted to determine treatment effect. The 8- and 10-week outcomes were averaged to obtain a measure of final outcome over a 1-month period comparable to the 1-month baseline ratings, again because of the inherent episodic variability in skin-picking behavior. Two separate analyses were conducted, for completers and for intent-to-treat. For the intent-to-treat analysis, we carried forward all ratings of the last week prior to discontinuing the trial. For the CGI-I and the VAS, we calculated the mean score of Weeks 8 and 10. For the SPTS, we subtracted the mean score of Weeks 8 and 10 from the baseline score to obtain the mean change in SPTS with treatment (SPTS-change). We then performed independent t tests to compare treatment outcome for each of the three skin-picking measures separately, with a conservative Bonferroni-corrected significance level of 0.17. Pearson's correlations were performed between change in skin picking and change in depression, anxiety, and obsessive-compulsive symptoms. Baseline, endpoint, and change in depression, anxiety, and obsessive-compulsive symptoms were compared between the fluoxetine and the placebo group with independent Student's t tests. All statistical analyses are two-tailed; mean values are accompanied by SD.

RESULTS

A total of 21 subjects were entered into the study, 16 women and 5 men, with a mean ± SD age of 34.2 ± 9.9 years (range, 20–58). Four subjects had no lifetime diagnosis of an Axis I psychiatric disorder. Fifteen subjects had a lifetime history of a depressive (N = 12) and/or an anxiety (N = 9) disorder. Specific Axis I diagnoses for the 21 subjects were as follows: panic disorder lifetime and current N = 1 (5%); social phobia lifetime and current N = 2 (10%); simple phobia lifetime and current N = 3 (14%); OCD lifetime N = 4 (19%) and current N = 3 (14%); GAD lifetime and current N = 4 (19%); major depression lifetime N = 10 (48%) and current N = 2 (10%); dysthymia lifetime N = 6 (29%) and current N = 5 (24%); alcohol dependence/abuse lifetime N = 3 (14%); drug dependence/abuse lifetime N = 5 (24%); somatization disorder current N = 1 (5%); bulimia nervosa lifetime N = 2 (10%); and anorexia nervosa lifetime N = 0 (0%). Mean age at onset of skin picking for the 21 subjects was 16.1 ± 9.0 years (range, 5–41). The mean duration of the behavior was 17.9 ± 11.7 years, with a minimum duration of 6 months in 1 subject. At baseline, the mean daily number of episodes per subject was 12.3 ± 16.7, and the mean daily time spent picking was 153.6 ± 244.8 minutes. The large standard deviations reflect that the pattern of the behavior ranged from multiple "hard-to-count" brief daily episodes to much less frequent episodes of several hours' duration.

Five patients picked at multiple body parts, while the majority picked predominantly at one body area: face (N = 6), lips (N = 1), scalp (N = 2), arms (N = 2), back (N = 1), hands (N = 3), legs (N = 1). Subjects used their fingernails, teeth, or, rarely, instruments such as pins. The majority (N = 15) of the subjects had no underlying skin condition and picked at minimal irregularities or "normal" skin, thus creating and perpetuating lesions. A few subjects had an underlying skin condition (1 had eczema, 1 had a burn scar, 4 had acne), but the major component of the exacerbation was clearly behavioral. For the average subject, skin picking was a highly dystonic behavior that was moderately resisted but poorly controlled.

Most subjects had engaged in the behavior continuously without notable prolonged breaks, while others did it intermittently with periods of months to years free of the behavior. Most reported awareness of an urge to pick, prolonged or fleeting, prior to engaging in the behavior. Some had an itching sensation, while some described that they picked "automatically" or "semiconsciously." Mounting tension prior to the act was experienced by 81% (N = 17) of the subjects, pleasure or relief immediately after by 52%

Table 1. Comparison of Fluoxetine Versus Placebo in Skin-Picking Outcome Measures*

	Completer Analysis							Intent-to-Treat Analysis						
	Fluoxetine (N = 6)		Placebo (N = 11)					Fluoxetine (N = 10)		Placebo (N = 11)				
Rating Scale	Mean	SD	Mean	SD	t	df	p	Mean	SD	Mean	SD	t	df	p
CGI-I	1.67	0.41	3.45	0.82	4.96	15	< .001[a]	2.60	1.82	3.45	0.82	1.41	19	.18
VAS	63.2	14.2	18.5	15.0	5.98	15	< .001[a]	47.9	28.0	18.5	15.0	3.03	19	< .01[a]
SPTS-change	3.42	1.50	1.59	1.63	2.27	15	.038	2.55	3.29	1.59	1.63	0.86	19	.40

*Abbreviations: CGI-I = Clinical Global Impression-Improvement scale, SPTS = Skin Picking Treatment Scale, VAS = visual analog scale.
[a]Signifies the comparisons that reached statistical significance for the Bonferroni-corrected significance level of p ≤ .017.

(N = 11), and either one of those characteristics by a 90% majority (N = 19).

All subjects described at least moderate distress over the behavior, including feelings of shame with inability to reveal the "secret" even to dermatologists, therapists, or significant others; social humiliation for being unable to control the behavior in public; or hopelessness in continuing to inflict upon themselves something viewed as incomprehensible or self-destructive. Many subjects experienced impairment in some aspect of their functioning. One patient had developed painful synovitis of the wrists that may have been related to years of picking at the scalp. One patient had such severe scarring of the skin between the thumb and the index finger that it was difficult to hold a pen to write. Another patient had a profoundly scarred face that interfered with her career and led others to avoid her. Soreness, bleeding, temporary large excoriations, and permanent discolorations and scarring were common; infections sometimes occurred. Several patients avoided any circumstance that involved exposing their skin lesions, with resulting restrictions in clothes worn, haircuts, sexual activity, and leisure/sports.

Six subjects had a history of other self-injurious behaviors, including nail biting (N = 4), hair pulling (N = 2), skin cutting (N = 1), skin burning (N = 1), and self-hitting (N = 1). Four subjects had a family history of pathologic skin picking in first-degree relatives, and 2 had family histories of hair pulling. Only 4 patients had received prior psychopharmacologic treatment (methylphenidate, lithium, doxepin, paroxetine, and desipramine), all for conditions other than skin picking, and picking had not improved with these treatments.

Ten subjects were randomized to fluoxetine and 11 to placebo, with 8 women in each group. All placebo patients completed the trial, while 4 fluoxetine patients did not. One discontinued the trial at Week 3, at which time picking was much improved (CGI-I = 2), deciding that she felt better and no longer needed medication. One subject dropped out at Week 6, when she developed a severe itching rash from the fluoxetine that also led to much worsened skin picking (CGI-I = 6). Two subjects dropped out at Week 8: 1 was having worsening of his skin picking and experiencing jitteriness and insomnia (CGI-I = 6); the other subject was much improved in her skin picking (CGI-I = 2), but

Figure 1. Graphic Depiction of the Three Outcome Measures (CGI, VAS, SPTS) Over the Course of the 10-Week Fluoxetine/Placebo Trial

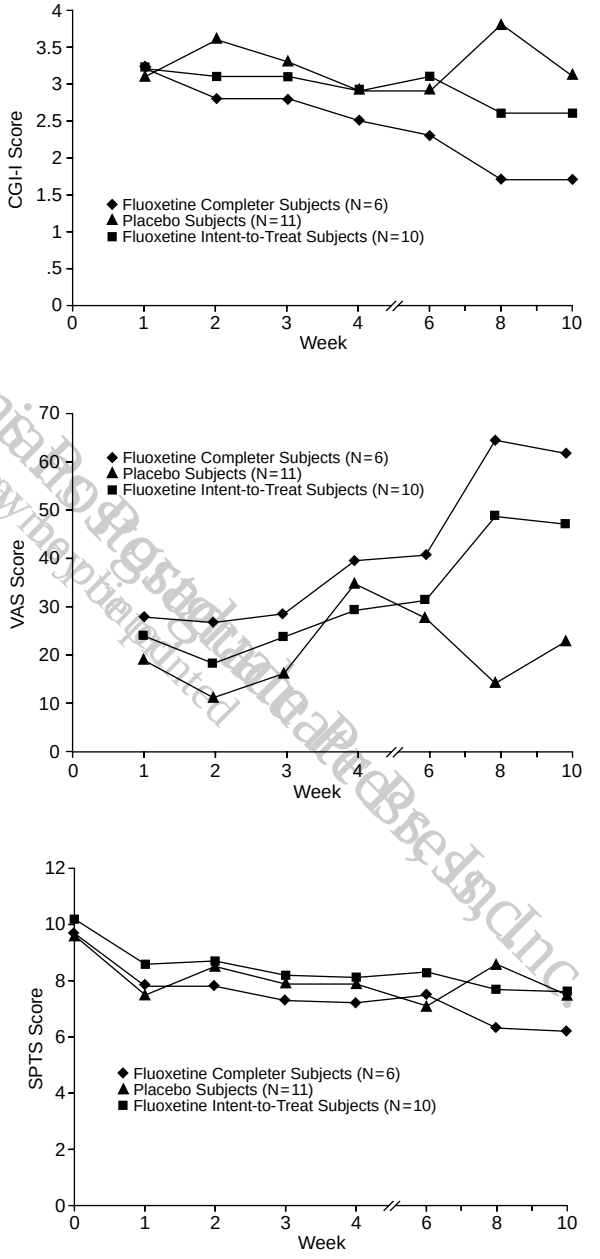

Table 2. Comparison of Associated Psychopathology With Fluoxetine Versus Placebo Treatment*†

	Placebo (N = 11)						Fluoxetine Completers (N = 6)					
	Baseline		Wk 8 + 10		Change		Baseline		Wk 8 + 10		Change	
Rating Scale	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
HAM-D	12.3	8.5	6.0	6.1	6.3	5.3	12.2	6.3	8.3	5.3	3.8	4.5
HAM-A	8.5	5.7	6.4	6.7	2.2	6.1	7.5	4.3	7.2	2.4	0.3	3.6
STAI	50.8	13.2	42.3	15.1	8.3	11.6	48.3	7.5	40.3	14.8	8.1	12.3
Y-BOCS	3.9	8.9	2.1	6.3	1.8	4.6	2.8	6.9	2.0	4.9	0.8	2.0

*Abbreviations: HAM-A = Hamilton Rating Scale for Anxiety, HAM-D = Hamilton Rating Scale for Depression, STAI = State-Trait Anxiety Inventory, Y-BOCS = Yale-Brown Obsessive Compulsive Scale.
†All comparisons between the two groups by independent Student's t tests were statistically nonsignificant.

had a history and recurrence of severe cystitis that necessitated emergent medical treatment. Therefore, a total of 17 subjects were included in the completer analysis, and all 21 were included in the intent-to-treat analysis.

Placebo subjects did not significantly differ from fluoxetine subjects in age (33.8 ± 11.5 vs. 34.6 ± 8.3 years; $t = 0.18$, $df = 19$, N.S.), age at onset (17.9 ± 9.1 vs. 14.0 ± 8.7 years; $t = 1.00$, $df = 19$, N.S.), duration of illness (186.0 ± 141.9 vs. 247.2 ± 145.8 months; $t = 0.97$, $df = 19$, N.S.), and baseline SPTS score (9.6 ± 1.2 vs. 10.2 ± 2.3; $t = 0.70$, $df = 19$, N.S.). The mean fluoxetine dose was similar for intent-to-treat subjects (53.0 ± 16.4 mg/day) and completer subjects (55.0 ± 15.2 mg/day).

Table 1 presents the results of the statistical comparisons between the two treatment groups for each of the three outcome variables, both for the completer and the intent-to-treat analyses. For the completer analysis, both the CGI-I and the VAS differed significantly between the two groups, while for the intent-to-treat analysis only the VAS reached statistical significance.

Figure 1 depicts in graph form the change in each of the three skin-picking measures over the 10-week trial for the fluoxetine (completer and intent-to-treat) and the placebo group. Of note, by the last month of treatment all 6 fluoxetine completers were clinical responders as defined by a CGI-I score of less than 3; 4 were much improved and 2 were very much improved. For the entire group of fluoxetine subjects, 8 of 10 were clinical responders as defined by the CGI-I: 6 much improved and 2 very much improved. In contrast, 3 of 11 subjects on placebo were much improved and none were very much improved.

Table 2 depicts baseline, endpoint, and change scores for depression, anxiety, and obsessive-compulsive symptoms for trial completers. The baseline scores indicate clinically low levels of depression, anxiety, and obsessive-compulsive symptoms in our sample. The differences between the fluoxetine and placebo groups were not significant at baseline, at endpoint, or as change scores. All Pearson's correlations between change in skin-picking measures and change in depression, anxiety, and obsessive-compulsive symptoms were also not significant.

Medication side effects in the fluoxetine and placebo groups for all subjects are summarized in Table 3.

Table 3. Side Effects Experienced by the 21 Subjects

	Fluoxetine (N = 10)		Placebo (N = 11)	
Side Effect	N	%	N	%
Decreased appetite	3	30	0	0
Weight loss	2	20	0	0
Diarrhea	2	20	0	0
Nausea	6	60	3	27
Vomiting	0	0	1	9
Indigestion/heartburn	2	20	0	0
Dry mouth	1	10	0	0
Blurry vision	2	20	0	0
Sweating	3	30	0	0
Headache	2	20	2	18
Muscle tension/soreness	3	30	1	9
Muscle twitching	1	10	0	0
Tremor	3	30	0	0
Nervousness/jitteriness	7	70	2	18
Increased energy	2	20	4	36
Insomnia	6	60	1	9
Fatigue/low energy	5	50	0	0
Sedation	4	40	1	9
Rash	1	10	0	0
Urinary frequency	4	40	0	0
Urinary hesitancy	1	10	0	0
Cystitis	1	10	0	0
Palpitations	1	10	0	0
Dizziness/light-headedness	3	30	2	18
Decreased libido	5	50	0	0
Impaired orgasm	4	40	1	9
Numbness	0	0	1	9
Depersonalization	1	10	1	9
Yawning	1	10	1	9
Tinnitus	1	10	1	9

DISCUSSION

Our findings indicate that fluoxetine was effective in the treatment of pathologic skin picking in a double-blind, placebo-controlled, parallel design, according to two of the three outcome measures for the completer analysis and one of the three outcome measures for the intent-to-treat analysis. This is the first controlled pharmacologic study of skin picking in the literature, and it supports previous case reports and open series on the efficacy of serotonin reuptake inhibitors in treating this condition.[22–25] The relatively small sample size of this trial lacks high statistical power and may be one explanation for why not all three outcome variables reached statistical significance, especially in the intent-to-treat analysis, which in-

cluded two fluoxetine nonresponders despite an 80% response rate. Other confounding factors may be the choice of the three particular outcome measures, the absence of a separate clinician to rate clinical response independent of medication management, and the patients' subjective impressions of whether they were taking fluoxetine or placebo based on side effect experiences despite the double-blind design. Indeed, for the fluoxetine completers, the discrepancy between the 36% improvement according to the clinician-rated SPTS and the 63% self-rated overall improvement is not readily explainable. It is difficult to know which is more accurate: an "objective" measure that may not fully capture and accurately quantify all aspects of the behavior, or a more global "subjective" impression. Our dropout rate of 40% for fluoxetine was somewhat high and may be a function of the higher doses used in this study. It may be that more moderate doses of fluoxetine would be adequate for the treatment of skin picking and better tolerated by subjects, but this was not tested in the current study.

The treatment response of skin picking in our trial bears some interesting similarities to that of obsessive-compulsive disorder, such as the approximately 40% to 60% clinical improvement of the condition and the delayed onset of response, which becomes apparent around 6 weeks of treatment. Thus, this trial may lend some support to the conceptualization of skin picking as an obsessive-compulsive spectrum disorder[2,6,8,12] based on pharmacologic response in addition to phenomenologic similarities. However, such a conclusion is very speculative given the small number of fluoxetine completers in this study.

Of interest are the overall low levels of depression, anxiety, and obsessive-compulsive symptoms in our subjects, as well as the absence of a relationship between skin-picking improvement and changes in these other dimensions of psychopathology, supporting the notion that the fluoxetine effect on skin picking may be a primary one. However, the relatively small sample size does preclude a definitive conclusion on this matter.

The findings of our fluoxetine trial stand in contrast to the negative findings of two fluoxetine trials in hair pulling,[28,29] although the serotonin nonselective reuptake inhibitor clomipramine has been shown, without subsequent replication, to be effective for hair pulling.[26] It is not readily apparent why fluoxetine might treat skin picking but not hair pulling. Skin picking is not classified in the DSM-IV with trichotillomania and the other impulse control disorders, and systematic comparisons between the two conditions have not been conducted to date. However, there appear to be definite similarities between skin picking and hair pulling in age at onset, sex ratio, clinical course, and characteristics of the behaviors such as frequency pattern, mounting tension, and release/gratification.[10,11,26,28,29] Our study and other studies also suggest comorbidity and family history links between the two behaviors.[10,28] Our finding of a response that starts to become apparent around the sixth week of treatment suggests that Christenson and colleagues' trial[28] may have been too short in duration. However, Streichenwein and Thornby[29] addressed this concern and still obtained negative results, despite longer treatment duration, higher dosing, and a larger sample size than ours. One explanation may be methodological differences between our study and the other two, such as the crossover study design or the instruments used; these explanations, however, do not appear very likely. The other possibility is that skin picking and hair pulling are biologically distinct conditions and that skin picking may be more closely related to obsessive-compulsive disorder. In this respect, a systematic comparison of impulsivity and compulsivity measures in patients with skin picking versus hair pulling would be of particular interest.

In summary, in this trial fluoxetine appears promising with regard to treatment of pathologic skin picking, but the trial had definite limitations and merits replication with a larger sample size, possibly a longer treatment duration or a maintenance treatment phase, and further objectified and validated measures of skin-picking behavior. Both serotonin selective reuptake inhibitors and clomipramine are worth investigating in future trials and should be compared to cognitive-behavioral techniques. In addition, the phenomenology of skin picking and its relationship to hair pulling and obsessive-compulsive disorder, as well as the neurochemistry of skin picking, are well worth further psychiatric investigation. The condition of "neurotic excoriations," with which dermatologists have been familiar for years, clearly also falls within the realm of psychiatry and deserves further study and treatment by our field.

Drug names: clomipramine (Anafranil), desipramine (Norpramin and others), doxepin (Sinequan, Adapin), fenfluramine (Pondimin), fluoxetine (Prozac), methylphenidate (Ritalin), paroxetine (Paxil), sertraline (Zoloft).

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