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Use of psychotropic drugs in dermatology: Unique perspectives of a dermatologist and a psychiatrist

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Abstract Psychocutaneous morbidity is commonly found in dermatologic practice. Patients generally refuse referral to psychiatry, and dermatologists cannot always provide psychotherapeutic support. By establishing an alliance with these patients and with working knowledge of the common psychotherapeutic agents used in dermatology, these patients can be managed comfortably by the clinician. The major categories of psychodermatologic agents include antipsychotics, antidepressants, anxiolytics, and antiobsessive compulsive drugs. In addition, cutaneous dysesthesia and pruritus can be treated with psychotherapeutic agents when other treatments have been exhausted. The motivated dermatologist can apply this knowledge to treat these common yet challenging cases.

Introduction

Psychocutaneous morbidity complicates more than one in three visits to the dermatologist.[1,2] It is well-established that psychiatric issues contribute to the emotional, social, occupational, and physical morbidity of skin diseases and that they can cause significant patient disability, affect patient compliance with treatment, and hinder maximum treatment outcomes.[2,3] It is by minimizing these issues through appropriate identification and treatment that psychologic stress is reduced and outcome is improved.[3] Many dermatologists, however, continue to lack awareness of psychiatric morbidity in their patients and are still unable to detect a considerable portion of pathology.[2] Nearly 20% of dermatology outpatients are taking a psychotropic medication[4]; therefore, psychosomatic issues and their management are an important part of day-to-day dermatologic practice.

The motivated clinician can manage patients with a psychocutaneous disorder or its symptoms. He or she should be comfortable in establishing an alliance with the patient: eliciting pertinent psychiatric and emotional information from the patient, translating this into a diagnosis, and constructing a diagnostically driven management plan. Referral to psychiatry is optimal, but many dermatologic patients refuse such a referral.[3] Time constraints and limited capabilities of the dermatologist to provide counseling or psychotherapy can be obstacles to providing nonpharmacologic treatment. The most feasible way for dermatologists to approach patients with psychocutaneous conditions is having a working knowledge of the common psychotropic medications used in dermatology.

General approach

The psychiatric complaints in clinical dermatology can be classified into:

- **Psychophysiologic disorders.** These are preexisting cutaneous diseases that are precipitated or aggravated by stressors or external factors. Examples of these include psoriasis, acne, and atopic dermatitis.

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- **Primary psychiatric disorders.** These are purely psychogenic and cannot be attributed to any organic or cutaneous cause. The cutaneous manifestations of these are wholly self-induced. This category includes delusions of parasitosis (DP), a type of monosymptomatic hypochondriacal psychosis, neurotic excoriations, factitial dermatitis, and trichotillomania.[3]
- **Secondary psychiatric disorders.** There is an obvious cutaneous disease that causes the development of psychiatric, emotional, and/or mood disturbances. These may arise in skin disorders such as hyperhidrosis, vitiligo, alopecia areata, and acne vulgaris.[3]
- **Cutaneous sensory disorders.** These are purely sensory disorders that lack an organic etiology or underlying skin disease, although there may be a concomitant psychiatric condition.[3]
- **Nonpsychiatric dermatologic disorders.** These are diagnoses in which traditional therapies may have been exhausted and could be empirically treated with a psychotropic medication.[3]

These disorders can be further classified into the major underlying psychiatric conditions found in dermatology[3]:

1. Psychotic and delusional disorders
2. Depressive disorders
3. Anxiety disorders
4. Obsessive-compulsive (OCD) and impulse-control disorders

At times, it may be difficult to differentiate between pathologies, and patients may present with more than one underlying psychiatric condition. In these situations, clinicians should be able to choose psychotherapeutics that are indicated for or are beneficial in multiple conditions.

Psychotic and delusional disorders

Of the psychotic and delusional disorders, the most frequently encountered is neurotic excoriation, followed by trichotillomania, delusions of parasitosis, and dermatitis artefacta.[5] These may evolve from a delusion, which is a fixed, false belief that the patient is convinced is true. This delusion revolves around a solitary concern that manifests itself as hypochondriasis and somatic complaints. These patients are otherwise functional and psychologically intact. When offered tactfully, 60% of these patients are willing to try a psychotropic medication, and two of three will respond clinically.[6]

Typical antipsychotics (first generation)

Pimozide is a traditional first-generation antipsychotic that is a centrally acting dopamine receptor antagonist with preferential affinity for the D_2 receptor (Table 1).[7-16] This action is thought to be responsible for its efficacy in delusions, and it has been in use as first-line therapy for delusions of parasitosis for nearly 40 years.[17,18] Up to 50% of patients have complete remission with pimozide.[17]

We recommend that pimozide be carefully titrated, beginning at 0.5 to 1 mg daily. The dose should be increased by 0.5 to 1 mg approximately every 2 weeks until there is an adequate treatment response. Once an effective dosage has been established, often between 2 and 4 mg daily, treatment should be expected to last at least 1 month, after which time the dose may be tapered down by 1 mg every month to the lowest possible maintenance dose or until completely discontinued.[3] It may be used to treat recurrent disease.

In addition to sedation, due to α-1-adrenergic receptor antagonism, pimozide may cause orthostatic hypotension, blurry vision, constipation, and urinary hesitancy. Owing to its dopaminergic effects, pimozide may stimulate prolactin, which can cause galactorrhea and amenorrhea. Pimozide also has adverse effects that are seen in doses greater than 6 to 10 mg daily, which are higher than the doses commonly used in dermatology.[7] Pimozide may cause extrapyramidal side effects, including acute dystonia (muscle rigidity), parkinsonism (masked facies, slow movements, resting tremor, hesitant gait), and akathisia (feeling of intense restlessness). These adverse effects may be symptomatically treated with benztropine (1 to 2 mg) or diphenhydramine (25 mg), either of which can be taken up to four times daily.[3]

Tardive dyskinesia may occur 6 months after initiation of pimozide.[7] This is characterized by involuntary rhythmic movements of the face, trunk, and extremities and may be irreversible. We are aware of only two reported cases of tardive dyskinesia, despite decades of use worldwide.[19,20] This may not be representative of the use of low dosages of pimozide in the dermatologic setting. A rare "withdrawal dyskinesia" may occur when pimozide is discontinued; however, this is a transient condition that primarily involves mouth twitching. Finally, pimozide may prolong the QTc interval, which may lead to arrhythmias and other cardiac disturbances. It is recommended that an electrocardiogram (ECG) be obtained to detect any preexisting abnormalities and establish a baseline.

Atypical antipsychotics (second and third generation)

These atypical antipsychotics are generally characterized as dopamine (D_2) and serotonin ($5\text{-}HT_2$) receptor antagonists (Table 1). Although they share the side effect profile of the typical antipsychotics, there is a decreased incidence of extrapyramidal side effects due to preferential $5\text{-}HT_{2A}$ receptor activity.[21]

The atypical antipsychotics commonly have potentially serious metabolic side effects including weight gain, hyperglycemia and diabetes mellitus, and lipid abnormalities.

Table 1 Summary of selected antipsychotics[7-16]

Drug	Trade name(s)	FDA indicated uses	Starting dose	Maintenance dose
Pimozide[a]	Orap	Gilles de la Tourette's Syndrome	0.5-1 mg daily	1-6 mg daily
Risperidone[a]	Risperdal	Schizophrenia, bipolar I disorder, irritability in autistic disorder	0.5-1 mg twice daily	2-3 mg twice daily
Paliperidone[a]	Invega	Schizophrenia, schizoaffective disorder	3-6 mg daily	3-6 mg daily
Olanzapine[a]	Zyprexa, Symbyax	Schizophrenia, bipolar I disorder	5-10 mg at night	5-20 mg at night
Ziprasidone[a]	Geodon	Schizophrenia, schizoaffective disorder, bipolar mania	20 mg twice daily (schizophrenia), 40 mg twice daily (mania)	28 mg twice daily (schizophrenia), 60-80 mg twice daily (mania)
Quetiapine[a]	Seroquel	Schizophrenia, bipolar disorder	25 mg twice daily	300-400 mg twice daily
Aripiprazole[a]	Abilify	Schizophrenia, bipolar I disorder, agitation in autistic disorder	2 mg at night	10-30 mg at night

FDA, Food and Drug Administration.
[a] Off-label dermatologic starting and maintenance dosing.

These increase the risk of the metabolic syndrome and cardiovascular disease. These side effects, as well as weight, blood pressure, and glucose and lipid profiles, should be monitored throughout the duration of therapy.

Risperidone is the only atypical antipsychotic that maintains a relatively high level of D_2 antagonism along with its serotonergic activity. It is the most reported atypical antipsychotic used in the treatment of DP.[22] Risperidone is well tolerated, with high compliance rates and low rates of relapse.[21,22] Dosage begins at 0.5 to 1 mg twice daily and is increased every 5 to 7 days until therapeutic dosage has been established, which can then be taken in a single dose at bedtime.[8] Side effects are often dose-dependent and adjustment can alleviate symptoms.[22] Risperidone may cause dizziness, rhinitis, anxiety, dysphoria, insomnia, sexual dysfunction, fatigue and sedation, and problems with eye accommodation.[23] In addition, it has the greatest incidence of hyperprolactinemia of all the atypical antipsychotics.[21]

Paliperidone, or 9-hydroxyrisperidone, is the active metabolite of risperidone and has 5-HT_{2A} and D_2 receptor antagonizing effects. It has been reported to induce remission of DP and pathologic skin picking.[9,10]

Olanzapine has a predilection for the 5-HT_2 serotonin receptor and the γ-aminobutyric acid receptor A, benzodiazepine receptor site. The treatment dose of olanzapine in dermatology has not been established; therefore, low dosages are recommended.[8] Olanzapine has one of the highest incidences of weight gain, hyperglycemia, and hyperlipidemia of the atypical agents but generally the lowest discontinuation rate.[21] If metabolic adverse effects warrant discontinuation, risperidone or another atypical may be tried, and metabolic disturbances tend to resolve.[21]

Quetiapine is a D_2, 5-HT_2, and H_1 receptor blocker. Very low doses correlate with histamine and adrenergic activity, with increasing dopaminergic and serotonergic activity at higher dosages.[24] Treatment-resistant patients and the elderly often respond to quetiapine.[24] Dermatologic dosing for quetiapine has not been established, and it is prudent to use lower dosages than for psychoses. It is the most sedating of all antipsychotics, and patients may experience tachycardia, dizziness, and gastrointestinal upset.[8-12,19,21-24] Although rare, withdrawal symptoms may occur with discontinuation. These include nausea and vomiting, lightheadedness, sweating, dyskinesia, orthostatic hypotension, tachycardia, nervousness, dizziness, headache, insomnia, and agitation.[11]

Ziprasidone is a second-generation antipsychotic that is an agonist at 5-HT_{1A}, antagonist at 5-HT_{1D} and 5-HT_{2C}, and an inverse agonist at 5-HT_{2A}. It is unique due to its high affinity for transporters of serotonin and norepinephrine. It may potentially be used in treatment of psychocutaneous disease, but this has yet to be reported. It has only a mild risk for hyperprolactinemia and rare, if any, risk of metabolic side effects.[21]

Aripiprazole is a third-generation antipsychotic characterized by its ability to stabilize the dopamine-serotonin system. It is a partial D_2 and 5-HT_{1A} receptor agonist and 5-HT_{2A} antagonist. In several cases, it provided rapid remission of DP within 2-8 weeks of therapy.[12,14,25,26] It has been also been reported to treat successfully neurotic excoriations.[25] Aripiprazole has little or no risk of metabolic disturbances, anticholinergic side effects, extrapyramidal symptoms, or tardive dyskinesia.[21] Other side effects include headache, heartburn, sedation, and agitation.[13]

Depression

Nearly 25% of patients presenting with a psychocutaneous complaint have a mood disorder, and of these, 13% meet the criteria for major depressive disorder.[5] A relationship between skin disease and depression has been established in conditions such as alopecia areata, neurodermatitis, and chronic urticaria.[27,28]

All antidepressants, regardless of class, are 60% to 80% efficacious.[8] The antidepressants commonly used in the

dermatologic setting are the tricyclic (TCAs) and tetracyclic antidepressants (TeCAs), selective serotonin reuptake inhibitors (SSRIs), selective serotonin norepinephrine reuptake inhibitors, serotonin modulators, and dopamine-norepinephrine reuptake inhibitors.

Selective serotonin reuptake inhibitors

SSRIs enhance serotonin activity by preferentially blocking 5-HT reuptake. The commonly used SSRIs are fluoxetine, paroxetine, sertraline, citalopram, escitalopram, and fluvoxamine (Table 2).[8,29-39] They are first-line therapy due to easy tolerability and favorable side effect profile.

Fluoxetine differs from the other SSRIs due to the long half-life of its active metabolite, norfluoxetine (4-16 days) and requires consideration of this upon discontinuation.[8] It was used successfully in pathologic skin picking, neurotic excoriations, and body dysmorphic disorder (BDD).[40,41]

Paroxetine is the only SSRI with no active metabolites. It is reported to have successfully treated pathologic skin

Table 2 Summary of antidepressants[8,29,30,31-39]

Drug	Trade name(s)	Drug classification	FDA indicated uses	Starting dose	Maintenance dose
Fluoxetine[a]	Prozac	SSRI	MDD, OCD, PMDD, panic disorder, bulimia nervosa	20 mg daily	20-60 mg daily
Paroxetine[a]	Paxil, Paxil IR and CR	SSRI	MDD, OCD, panic disorder, social phobia, GAD, PTSD, PMDD	IR: 20 mg daily CR: 25 mg daily	IR: 20-50 mg daily CR: 25-62.5 mg daily
Sertraline[a]	Zoloft	SSRI	MDD, OCD, panic disorder, PTSD, PMDD, social phobia	50 mg daily	50-200 mg daily
Citalopram[a]	Celexa	SSRI	MDD	20 mg daily	20-60 mg daily
Escitalopram[a]	Lexapro	SSRI	MDD, GAD	10 mg daily	10-20 mg daily
Fluvoxamine[a]	Luvox	SSRI	OCD, social phobia	50 mg at night	100-300 mg daily in divided doses
Venlafaxine[a]	Effexor, Effexor XR	SNRI	MDD, GAD (XR only)	IR: 37.5 mg twice daily XR: 37.5-75 mg daily	IR: 75-325 mg in divided doses XR: 75-225 mg daily
Duloxetine[a]	Cymbalta	SNRI	MDD, GAD, diabetic neuropathy, fibromyalgia	30 mg daily	40-60 mg daily
Bupropion[a]	Wellbutrin, Wellbutrin SR, Wellbutrin XL	DNRI	MDD, SAD	IR: 100 mg twice daily SR: 150 mg daily XL: 150 mg daily	IR: 150-300 mg in divided doses SR: 150-300 mg daily XL: 150-300 mg daily
Trazadone[a]	Oleptro	Serotonin modulator	MDD	150 mg daily	150-375 mg daily
Doxepin[a]	Sinequan, Silenor, Prudoxin, Zonalon	TCA	MDD, GAD, insomnia (Silenor), pruritus due to atopic dermatitis or lichen simplex chronicus (Prudoxin, Zonalon)	25 mg at night	100 mg at night (MDD), 10-100 mg at night for pruritus
Amitriptyline[a]	Elavil	TCA	MDD	10-25 mg at night	100 mg at night (MDD), 25-75 mg at night for postherpetic neuralgia
Clomipramine[a]	Anafranil	TCA	OCD	25 mg at night	150-200 mg daily
Mirtazipine[a]	Remeron	TeCA	MDD	15 mg at night	15-45 mg at night

CR, controlled release; *DNRI,* dopamine norepinephrine reuptake inhibitor; *FDA*, Food and Drug Administration; *GAD,* generalized anxiety disorder; *IR,* instant release; *MDD,* major depressive disorder; *OCD,* obsessive-compulsive disorder; *PMDD,* premenstrual dysmorphic disorder; *PTSD,* posttraumatic stress disorder; *SAD,* seasonal affective disorder; *SNRI,* selective serotonin norepinephrine reuptake inhibitor; *SSRI,* selective serotonin reuptake inhibitor; *TCA,* tricyclic antidepressant; *TeCA,* tetracyclic antidepressant; XR, extended release.

[a] Off-label dermatologic starting and maintenance dosing.

picking and trichotillomania.[42] It has also been used for the treatment of chronic pruritus.[43] In addition to the conventional SSRI side effect profile, paroxetine may cause weight gain, memory impairment, and paresthesias, and can rarely precipitate mania or hypomania.[44,45] It poses reproductive risks, because it can cause sperm DNA fragmentation.[46]

Sertraline is another common SSRI also useful in panic and social phobia disorders. It has been used to treat neurotic excoriations.[47]

Citalopram is an antidepressant and antianxiety agent. Escitalopram, the *S*-stereoisomer of its predecessor citalopram, has the highest affinity for the serotonin receptor of all the SSRIs. It is as effective as the other SSRIs and reportedly more cost-effective.[48]

Fluvoxamine has a predilection for the serotonin receptor and exhibits the highest affinity for the σ_1 receptor of any SSRI, which enhances its antidepressant properties.[45] Fluvoxamine has been found to improve symptoms in patients with neurotic excoriations, chronic pruritus, BDD, and trichotillomania.[41,43,49,50] Fluvoxamine causes less sexual dysfunction compared with the other SSRIs.[51]

SSRIs require a minimum trial of 4 to 6 weeks for maximum therapeutic benefits. The medication is continued for several months, because rapid discontinuation will increase the risk of relapse. Gradual discontinuation is encouraged due to withdrawal symptoms that include anxiety, agitation, nausea, diaphoresis, dizziness, and sensory distortion. If no clinical improvement occurs after 6 weeks, or the patient cannot tolerate side effects, the clinician should consider switching to another antidepressant.

As a class, the SSRIs may cause sleep changes, gastrointestinal disturbances including constipation, diarrhea, nausea, vomiting, and sexual dysfunction. In addition, drug interactions are common due to hepatic metabolism through the cytochrome P450 pathway.[8] The most serious considerations with SSRI use are the possibility of worsening depression and the risk of suicide, plus the development of the serotonin syndrome or neuroleptic malignant syndrome-like reaction when serotoninergic drugs, such as SSRIs and serotonin norepinephrine reuptake inhibitors, are used concomitantly with monoamine oxidase inhibitors, triptans, antidopaminergic agents, or antipsychotics.[45]

Serotonin-norepinephrine reuptake inhibitors

The atypical antidepressant venlafaxine is a serotonin-norepinephrine reuptake inhibitor that at high doses exhibits dopaminergic activity (Table 2). Venlafaxine is useful in patients who fail SSRI therapy fails or who have symptoms of depression and anxiety or OCD.[52,53] There is some evidence that venlafaxine is superior to SSRIs and TCAs.[54]

Venlaxafine is an activating agent with autonomic properties. Patients commonly experience dose-dependent hypertension, tachycardia, insomnia, anorexia, and agitation, while other side effects include nausea, sweating, dizziness, headache, constipation, dry mouth, and sexual dysfunction.[29] Most of its side effects are dose-dependent and may require titration. Venlafaxine may lower the seizure threshold. At extremely high doses, patients can have dose-dependent and treatment duration-dependent memory loss.[55] A taper is advised to avoid withdrawal symptoms, including dizziness, anxiety, agitation, nausea, sensory disturbances, and diaphoresis.[29]

Serotonin modulators

Trazodone is indicated for major depressive disorder (Table 2). It inhibits serotonin reuptake and is a 5-HT_{2A} and 5-HT_{2C} receptor as well as an α-1-adrenergic receptor antagonist.[30] Rarely, it is associated with priapism.[30]

Dopamine-norepinephrine reuptake inhibitors

Bupropion is another atypical antidepressant that is a dopamine-norepinephrine reuptake inhibitor and a nicotinic and acetylcholine receptor antagonist (Table 2). Bupropion is as efficacious as the SSRIs.[8] Unlike SSRIs, bupropion does not cause sexual dysfunction. Patients taking bupropion may experience headache, insomnia, agitation, constipation, dry mouth, nausea, and tremor. Bupropion can also lower the seizure threshold particularly when combined with alcohol.

TCA and TeCAs

TCAs and TeCAs are categorized by the number of rings in their chemical structures (*i.e.*, 3 and 4, respectively); however, both inhibit serotonin and norepinephrine reuptake, as well as block histamine, muscarinic acetylcholine, and noradrenergic receptors. These properties also account for their antidepressant activity and adverse effects. They may cause sedation, blurry vision, dry mouth, urinary retention, decreased gastrointestinal motility, orthostatic hypotension, and narrow-angle glaucoma. They may also lower the seizure threshold and cause cardiac disturbances, including QTc interval prolongation, conduction abnormalities, and arrhythmias.

The most commonly used TCA in dermatology is doxepin, which has potent H_1 and H_2 histamine-blocking activity (Table 2). Doxepin is first-line "off-label" treatment for neurotic excoriations, generalized pruritus, and chronic urticaria.[56]

Although antipruritic and sedating effects occur soon after administration, onset of action to maximum therapeutic effect, including antidepressant activity, is seen after at least 2 weeks. Lower dosages have antipruritic and sedative effects but are not likely to have antidepressant activity.[3] Treatment response may vary due to variable plasma concentrations of doxepin, and the dose may be adjusted to obtain therapeutic values. Serum doxepin levels may be useful in monitoring individual patients.[3] Doxepin is also available in a topical cream formulation for pruritus.

Abrupt discontinuation of a TCA, such as doxepin, can cause withdrawal symptoms, including nausea, headache,

diaphoresis, dizziness, insomnia, malaise, and unusually vivid dreams. These disturbances can be avoided with gradual tapering of the medication over 2 to 3 months.[57] If needed, judicious use of a short-acting benzodiazepine, anticholinergic agent, or propranolol may be used to alleviate withdrawal symptoms.[57] Drug interactions are also common and should be taken into consideration when prescribing these psychotropic medications.

Mirtazapine is a TeCA as well as noradrenergic and specific serotonergic antidepressant that antagonizes adrenergic α_2-auto- and α_2-heteroreceptors as well as 5-HT_2 and 5-HT_3 receptors (Table 2).[58] It is indicated for depression and useful in anxiety disorders, panic disorder, somatoform disorder, and neuroleptic-induced akathisia.[59-62] Mirtazapine has been successfully used for pruritus related to malignancy, cholestasis, renal failure, atopic dermatitis, and neurotic excoriations.[63,64] It requires a trial of 2 to 4 weeks for sufficient therapeutic benefit.[63,64]

Anxiety disorders

Anxiety disorders can be characterized as acute or chronic anxiety or panic disorders, or phobias directed at specific situations or objects. Anxiolytics and antidepressants are the mainstay of treatment and depend on the acuteness and projected time course of the process (ie, acute or self-limited, or chronic). Treatment may relieve the precipitating stress in psychophysiologic cutaneous disease or minimize the anxiety or phobia arising from dermatologic disease as in secondary psychiatric disorders.

Benzodiazepines

The benzodiazepines include alprazolam, oxazepam, lorazepam, and temazepam (Table 3).[8,29,65-68] As a class, they potentiate γ-aminobutyric acid and should only be used in the short-term treatment (7 to 10 days) of anxiety and phobias due to their addictive potential. These agents have a short half-life and are cleared quickly through the body, making them relatively safe.[8]

During this treatment course, acute or self-limited episodes of anxiety often resolve. The most common side effect is sedation. Withdrawal symptoms, including depression, seizures, psychotic episodes, and autonomic nervous system disturbances, can be avoided using a taper. Rebound symptoms include anxiety, sleep disturbances, and restlessness. Other side effects include alcohol intolerance, concentration and driving disturbances, agitation, and sexual dysfunction.[56]

Nonbenzodiazepines

Chronic anxiety can be treated with the nonbenzodiazepine buspirone or the antidepressants paroxetine, citalopram, escitalopram, or extended-release venlafaxine (Table 2).

Buspirone is a serotonin 5-HT_{1A} receptor partial agonist used in anxiety and panic disorders and OCD.[69] The onset of action is 2 to 4 weeks, which makes it appropriate for chronic anxiety. It has no addictive properties and is generally tolerated well, with side effects limited to dizziness, fatigue, headache, or nausea.

Approach to obsessive-compulsive and impulse control disorders

Of referrals to the dermatology clinic, 20% of patients were found to have OCD, with 94% of these patients having no previous OCD diagnosis.[70] An obsession is defined as an intrusive, recurrent, ego-dystonic idea, while a compulsion is a behavioral response to an obsession. These may

Table 3 Summary of anxiolytics[8,29,65-68]

Drug	Trade name(s)	Classification	FDA indicated uses	Starting dose	Maintenance dose
Alprazolam[a]	Xanax	Benzodiazepine	GAD, panic disorder with and without agoraphobia	0.125-0.25 mg PRN up to 4 times daily	0.25-0.5 mg PRN up to 3 times daily
Oxazepam[a]	Serax	Benzodiazepine	Anxiety, alcohol withdrawal syndrome	10-15 mg PRN up to 3 to 4 times daily	10-15 mg PRN up to 3 to 4 times daily, maximum daily dose 4 mg
Lorazepam[a]	Ativan	Benzodiazepine	Anxiety, insomnia, status epilepticus	1-2 mg PRN up to 2 to 3 times daily	1-2 mg PRN up to 2 to 3 times daily, maximum daily dose 4 mg
Temazepam[a]	Restoril	Benzodiazepine	Insomnia	7.5 mg at night	7.5-30 mg at night, maximum daily dose 30 mg
Buspirone[a]	Buspar	Nonbenzodiazepine	GAD	7.5 mg twice daily	15-60 mg 2 to 3 times daily
Venlaxafine XR[a]	Effexor XR	SNRI	MDD, GAD	XR: 37.5-75 mg daily	XR: 75-225 mg daily

CR, controlled release; *FDA,* Food and Drug Administration; *GAD,* generalized anxiety disorder; *IR,* instant release; *MDD,* major depressive disorder; *PRN,* taken as needed; *SNRI,* selective norepinephrine serotonin reuptake inhibitor; *XR,* extended release.

[a] Off-label dermatologic dosing.

manifest as pathologic skin picking, trichotillomania, or neurotic excoriation.

The SSRIs fluoxetine, paroxetine, sertraline, citalopram, escitalopram, and fluvoxamine are first-line medications for OCD. They usually require a 3-month trial and high dosages for efficacy.[8] Once clinical improvement has been achieved, treatment should be continued for 6 to 12 months.[71] Patients should be weaned off the medication and restarted if symptoms return.

The TCA clomipramine was found to be useful in BDD, trichotillomania, and OCD (Table 2).[41,72,73] In addition, the combination of venlafaxine and aripiprazole has been reported as efficacious in treating impulse-control disorder and neurotic excoriations.[25]

Cutaneous sensory disorders

Cutaneous sensory disorders refer to sensations that occur without underlying pathology. Patients may describe uncomfortable feelings of burning, stinging, crawling, or biting.[3] These symptoms may generally be classified as cutaneous dysesthesia or pruritus.

Cutaneous dysesthesias

The TCAs (doxepin, nortriptyline, maprotiline, imipramine, and desipramine) and SSRIs are useful in pain syndromes and cutaneous dysesthesias, in particular amitriptyline (Table 2).[27,73-75] Mirtazapine is a consideration when patients cannot tolerate the anticholinergic effects of TCAs. Duloxetine is a selective norepinephrine reuptake inhibitor that is indicated for depression, anxiety, diabetic peripheral neuropathy, and fibromyalgia. Owing to its efficacy in pain and neuropathic disorders, it may be a reasonable treatment option for cutaneous sensory disorders. Gabapentin is a γ-aminobutyric acid analog with intermediate onset of action and low potential for abuse. It is used in cases of neuropathic pain and pruritus. It is generally safe and has minimal risk of drug interactions.

Pruritus

Similarly, the TCAs and SSRIs may be used in pruritus. Another option is naltrexone, an opiate receptor antagonist commonly used in substance dependency. It reduces pruritus by 50% in many dermatologic conditions and is efficacious in trichotillomania, cutaneous self-injury, and neurodermatitis.[76-78] Side effects include nausea, diarrhea, dizziness, and fatigue. Caution must be taken with patients who are opiate abusers because it will precipitate withdrawal.

Conclusions

The management of psychocutaneous disorders depends on a multidisciplinary approach that includes referral to psychiatry; however, the patient can create barriers to this type of supportive management. In this case, the dermatologist can provide treatment by establishing a working alliance with the patient and offering psychotropic medications. This requires working knowledge of the common psychotherapeutics used in dermatology and frequent follow-up to monitor for clinical efficacy and side effects. Classifying the patient's complaints into the type of disorder (eg, primary vs secondary) and then by psychocutaneous etiology (eg, psychosis, depression) can define these complaints and facilitate management. Being well-versed in the common psychotherapeutics for each diagnosis will allow the clinician to comfortably treat these patients.

As new psychotropic medications are introduced to the market and because medication dosing and indications may change, we recommend that the clinician refer to databases such as PubMed to be periodically updated on the use of psychotropics in dermatology.

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