Psychodermatology: An Update

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1 Introduction

Psychodermatology or Psychocutaneous medicine straddles the interface of psychiatry and dermatology. Estimates of dermatological and psychiatric co-morbidity are high, ranging from 30% to 60% (Korabel et al., 2008; Orion & Ben-Avi, 2011). Understanding the psychosocial and occupational context of skin disease is critical for the optimal management of psychocutaneous disorders. Correlation between psychiatric and dermatological disorders exists due to more than a fact, that the brain, as the center of psychological functions, and the skin has the same ectodermal origin. Connecting the two disciplines is a complex interplay between neuroendocrine and immune systems that has been described as the NICS, or the neuro-immuno-cutaneous system. The interaction between nervous system, skin and immunity has been explained by release of mediators from NICS (Yadav et al., 2013) (Figure 1). It is a highly complex relation considering etiology, diagnostic procedures and treatment. Liaison therapy enables multidisciplinary approach with the cooperation of psychiatric and dermatologic teams and simultaneous diagnostic procedures and the treatment of patients with psychocutaneous disorders. Survey among psychiatrists and dermatologists has shown that knowledge about the diagnosis, treatment and/or appropriate referral for psychocutaneous disorders is lacking (Jafferany et al., 2010a; Jafferany et al., 2010b). Significant information gaps were also identified in the knowledge of patient or family resources on psychodermatology in dermatology and psychiatry residency programs and regular CME events (Jafferanyet al., 2010a; Jafferanyet al., 2010b).

2 Classification of Psychocutaneous Phenomena

2.1 Dermatological Disease with Psychiatric Manifestations (Secondary Psychiatric Disorders)

This category includes patients who have emotional problems as a result of having skin disease. Symptoms of depression and anxiety, work-related problems and impaired social interactions are frequently observed. Fundamentally, dermatological diseases are in this group, but these diseases are strongly influenced by psychosomatic factors. Although the etiology of the disease is physiological, psychological factors and stress exacerbate the dermatological symptoms and psychosocial effects of the diseases increase stress. The most important variable that results in psychological susceptibility in dermatological diseases is deformation. The magnitude of this effect is closely related to patients’ relationships between self-perception and others (Alopecia areata, Chronic eczema, Cystic acne, Hemangiomas, Ichthyosis, Psoriasis, Vitiligo, Rhinophyma, Melasma, Androgenetic alopecia, Hirsuitism, Scars/keloids, Kaposi’s sarcoma).

2.2 Dermatological diseases influenced by psychosocial stress (Psychophysiological disorders)

The etiology of the disease is, again, multifactorial. On the one hand, stressful situations, and on the other hand, complex physiological and psychological defense mechanisms attract attention. The relationship between dermatosis and psychological conditions is least understood in this group. While looking for the organic causes, psychological reasons should also be considered in these patients. There are various theories about the complicated mechanisms that cause diseases. Psychoneuroimmunological factors have a
Various Stress producing stimuli

Psychological: Anxiety, depression, anger, frustration and helplessness

Environmental: Heat or cold, noise, pollutants, UV light, mechanical damage, high/low humidity, allergens

Behavioural: Isolation, overcrowding, physical restraint, enforced starvation, change in diet, job strain, burnout, unemployment and refugee status

HPA axis & Autonomic nervous system activation

↑ CRH, ACTH, PRL

CRH, Growth Factors (NGF, SCF) released

CRH-R receptor on Mast cell activated

Skin mast cell activation

Supresses TH1 immune response
Upregulates TH2 immune response
↑ Skin serotonin level

Immune dysregulation
Neurogenic inflammation
Proinflammatory response
Vasodilation

Inflammatory
Autoimmune
Allergic skin disorders

↑ Substance P
CGRP, VIP
Neuropeptide Y
Somatostatins
Neurokins A and B
Opiomelanocortins

Figure 1: Interplay of various factors leading to psychocutaneous disorders (Modified from Yadav et al, 2013). ACTH: Adrenocorticotropic hormone; CGRP: calcitonin gene related peptide; CRH: corticotrophin releasing hormone, CRH-R: CRH receptor; HPA: Hypothalamus pituitary adrenal; NGF: Nerve growth factor; PRL: Prolactin; SCF: stem cell factor; Th: T helper; VIP: vasoactive intestinal peptide.
role in the majority of diseases. Patients in this group are the most difficult to treat (Acne, Alopecia areata, Atopic dermatitis, Psoriasis, Psychogenic purpura, Rosacea, Seborrheic dermatitis, Urticaria (hives)).

2.3 Psychiatric Disorders with Cutaneous Manifestations (Primary Psychiatric Disorders)

In this group, the underlying cause of symptoms is psychiatric but when these patients present to a dermatologist, they deny their psychopathologies and want to be treated by the dermatologist. Directly destroying the defenses of these patients and referring them to psychiatry is harmful because of the possibility of suicidal intentions or the appearance of severe psychiatric conditions. Brief and frequent dermatology consultations let the patient develop a good relationship, making the passage to psychiatry easier (Delusions of parasitosis, Bromosiderophobia, Dysmorphophobia, Factitial dermatitis, Neurotic excoriations, Trichotillomania, Somatoform pain disorders, Psychogenic purpura, Eating disorders).

| SLE: malar erythematous rash, discoid rash, patchy alopecia, photosensitivity, other rashes (maculopapular, urticarial, bullous), vasculitis (nodules, ulcers, purpura, infarcts). |
| Essential mixed cryoglobulinemia: urticaria, palpable purpura, ecchymoses, macules & papules, nodules, vesicles and bullae, necrotic ulcerations |
| Hyperthyroidism: increased sweating, warm moist skin, fine hair, hair loss. |
| Hypothyroidism: cool dry skin, edema, hair loss |
| Cushing's syndrome: purple striae, excessive bruising, acne, hirsuitism, edema |
| Addison's disease: hyperpigmentation |
| Porphyria: blisters, abrasions, hyperpigmentations, hypertrichosis, photosensitivity |
| AIDS: Kaposis sarcoma, seborrheic dermatitis, pruritus, other manifestations of opportunistic infections (e.g. herpes, candidiasis, syphilis). |

**Table 1:** Medical Illness with Neuropsychiatric and Dermatological manifestations

| Steroids: depression, hypomania, mania, delirium, acute delusions, hallucinations. |
| Isotretinoin: depression, suicidal thoughts and even suicidal attempts. |
| Rifampicin: drowsiness, dizziness, confusion, behavioral changes, cognitive disturbances, delusions, hallucinations. |
| Dapsone: insomnia |
| Acyclovir: aggression, delirium, hallucinations, depression, psychosis. |
| Chloroquin: fatigue, personality changes. |
| Cetrizine: drowsiness, dizziness, insomnia, nervousness, irritability, depersonalization, depression. |
| Fexofenadine: insomnia, nervousness, sleep disorders, terrifying dreams. |
| Zidovudine: insomnia, agitation. |

**Table 2:** Psychiatric side effects of Dermatological treatment
Lithium: maculopapular and urticarial eruptions; alopecia (diffuse or localized); increase in verrucous growths (warts); precipitation and exacerbation of psoriasis and acne; folliculitis; lupus like syndrome; exacerbation of Darier’s disease (keratosis follicularis); nail pigmentation; exfoliative dermatitis.

Antipsychotics: skin pigmentation changes (especially phenothiazines, thioridazine, haloperidol, clozapine, perphenazine); photosensitivity; lupus like syndrome (especially chlorpromazine, thioridazine, perphenazine); hypersensitivity reactions (urticaria, macupapular eruptions, petechiae, and edema); contact dermatitis (especially with oral suspension or solution of thioridazine, haloperidol or fluphenazine); injection site reaction with haloperidol decanoate; seborrheic dermatitis; erythema multiforme, Stevens-Johnson syndrome, nonthrombocytopenic purpura; urticaria; palmar erythema.

Antidepressants: allergic reactions including urticaria, macular or maculopapular skin rash; petechiae; leukonychia, angioedema, purpura and exfoliative dermatitis; erythema multiforme (reported with trazodoneplus lithium, sertraline and fluoxetine); serum sickness (with fluoxetine); photosensitivity (with tricyclic antidepressants); leukocytoclastic vasculitis (with trazodone, maprotiline or fluoxetine); acne (with maprotiline; pustular psoriasis with trazodone); alopecia (with imipramine and fluoxetine); pathologic sweating.

Anticonvulsants: Carbamazepine pruritic rashes, exfoliative dermatitis, systemic lupus erythematosus, hair loss, erythema multiforme and Steven-Johnson syndrome, hypersensitivity reactions characterized by a generalized skin rash, lymphadenopathy and fever.

Valproic acid associated with hair loss, changing hair colour, scleroderma, cutaneous vaculitis and systemic lupus erythematosis.

Lamotrigine maculopapular &/or erythematous eruptions, Steven-Johnson syndrome, toxic epidermal necrolysis, angioedema, and a rash associated with a variable number of systemic features including fever, lymphadenopathy, facial swelling, hematologic and hepatologic abnormalities.

Gabapentine associated with alopecia.


Methylphenidate: erythema multiforme, exfoliative dermatitis, hair loss, rash, urticaria.

Atomoxetine: dermatitis.

Rivastigmine: urticaria, Stevens-Johnson syndrome

Modafinil: dry skin

Naltrexone: skin rash

Table 3: Cutaneous side effects of psychotropic medications

3 Dermatological Disease with Psychiatric Manifestations

The psychosocial effect of skin diseases is considerable and unappreciated. Although skin conditions are usually not life-threatening, because of their visibility they can be "life-ruining." Persons with disfigurement frequently feel psychologically and socially devastated as a result. Moreover, persons with skin disorders have trouble getting jobs in which appearance is important (Ginsburg & Link, 1993). It is also well documented that persons with visible disfigurement face discrimination, especially if the condition is perceived to be contagious (Love et al., 1987). There are certain findings which explain high co-morbidity of cutaneous and psychiatric disorders:

a) Chronic skin disease involves life adaptation which, in most cases, results in lower life quality, influencing patient’s social life and making the treatment more difficult
b) Noticeability of skin lesions exposes the patient to negative society reactions and stigmatization because of disfigurement, resulting in patient’s loss of self-confidence

c) Factors like severe anxiety, emotional instability and loss of self–confidence reduce the quality of life and working abilities in such patients.

Assessment of the impact of skin disease on patients’ lives revealed that 29% of cases had symptoms of depression and 61% had symptoms of anxiety and felt that they had a lack of spontaneity. Forty percent of cases felt that their social lives were impaired due to the skin disease and 64% indicated that they had work-related problems due to the skin disease (Jowett & Ryan, 1985). The most common findings on assessment of patients with dermatologic disease using psychiatric rating scales are high scores on depression and anxiety (Chaudhury & Das, 1998a, 1998b; Chaudhury et al., 1993). The skin diseases most frequently implicated with co-morbid psychiatric diagnoses are eczema, psoriasis and acne vulgaris (Barankin & Dekoven, 2002). Alexithymia is a personality trait characterized by difficulties in differentiating and describing feelings. Preliminary data show that alexithymia is associated with alopecia areata, psoriasis, atopic dermatitis, vitiligo and chronic urticaria. Besides treating comorbid psychological problems such as anxiety and depression, dermatologists should also be aware of alexithymia and its possible association with an underlying dermatologic disease (Chaudhury & Das, 1998a; Willemsen et al, 2008).

3.1 Acne

Skin conditions, such as acne, are sometimes thought of as insignificant in comparison with diseases of other organ systems. Physicians’ assumptions about the effects of a skin condition are often inaccurate. The psychological effect of acne is unique for each patient. Patients should be asked how much their acne bothers them, regardless of how severe it appears to physicians. Acne’s effect on psychosocial and emotional problems, however, is comparable to that of arthritis, back pain, diabetes, epilepsy, and disabling asthma (Mallon et al., 1999). Acne vulgaris often flares with stress and premenstrually. With worsening of the acne, many individuals get more stressed, setting up a vicious cycle (Shenefelt, 2010). Acne has a demonstrable association with depression and anxiety; it affects personality, emotions, self-image and esteem, less satisfaction with general appearance, feelings of social isolation, social impairment and lower quality of life (Barankin & Dekoven, 2002; Mallonet al., 1999). Its substantial influence is likely related to its typical appearance on the face, and would help explain the increased unemployment rate of adults with acne. Because the face is so important to body image, young men with severe scarring acne are at particular risk of depression and suicide (Cotterill & Cunliffe, 1997). A population based study of 3775 adolescents, including 493 suffering from self-declared substantial acne observed that suicidal ideation was reported by only 9.5% of those with no acne or little acne, 18.6% of those with moderate acne, and 24.1% of those with substantial acne (odds ratio approximately 2). The differences were greater in boys than in girls (Halvorsen et al, 2011). Acne appears to be an independent risk factor for suicidal ideation, especially in boys (Misery, 2011). Poor self-concept, perfectionist and compulsive personality traits, correlated more strongly with self-excoriative behavior than the dermatologic indices of acne severity, suggesting that psychological factors, independent of acne severity, play an important role in the perpetuation of the self-excoriative behavior exhibited by some women with acne (Gupta et al, 1996).

Much of the disability caused by acne can be reduced with appropriate medical treatment. Interventions, such as isotretinoin, that minimize or prevent scarring and reduce duration of the condition have the
most pronounced psychosocial benefit (Misery et al., 2012). Stress reduction techniques like relaxation training, biofeedback, meditation, or self-hypnosis may be helpful (Shenefelt, 2010).

3.2 Atopic dermatitis (AD)

AD is a complex disease traditionally involving interaction of genetic, environmental, and immunologic factors. Recent studies suggest psycho-neuro-immunologic factors and emotional stress are important in its evolution. The observations that internal (bacterial infections) or external (psychologic) stressors may induce AD flares is explained by studies showing that stress impairs the skin barrier function and favors a shift in immunity toward a T helper type 2 cell/allergic response. Furthermore, those with AD appear to have an inherited hypothalamic deficiency that impairs normal hypothalamic-pituitary-adrenal axis function. Neuropeptides released in the skin may also mediate neurogenic inflammation, including mast cell degranulation. AD causes significant stress and impaired quality of life in patients and their family members (Arndt et al, 2008).

When AD affects infants, skin sensation is often altered, which can result in impaired emotional development because the skin is critical in sensory perception and communication. Skin contact between infants and parents contributes not only to infants’ learning their boundaries, but also positively affects the attitudes of caregivers; this serves to generate feelings of well-being and self-esteem (Koblenzer, 1996). AD can cause many sleepless nights for children, and therefore also their parents. It can also interfere with school performance and social relationships. One study found twice the rate of psychological disturbance among children with moderately severe and severe AD as among a control group (Absolon et al, 1997). Parents of infants and children with this condition often are anxious, frustrated, and angry both with their children and with their physicians. Providing a few extra minutes to empathize with a patient’s or parents’ unique situation can help a strained therapeutic relationship.

The onset or exacerbation of atopic dermatitis often follows stressful life events (Picardi & Abeni, 2001). Adult patients with this condition can have substantial salary loss from missed work, as well as large expenditures for emollients, topical steroids, clothing and bedding, laundry, and possibly consultation with alternative medicine practitioners. Along with the financial strain, patients are often concerned about personal appearance, attractiveness, career aspirations, and the ability to form personal relationships. Impaired sexual function through both physical and psychological mechanisms can compound the adverse effects (Barankin & Dekoven, 2002; Gil, 2006). Adults with AD are often anxious and depressed with problems in psychosocial adjustment and low self-esteem (Lapidus & Kerr, 2001; Bockelbrink et al, 2006; Hashizume et al, 2005; Gupta & Gupta, 2003). Psychological and stress-reduction interventions significantly improve cutaneous manifestations and patient well-being (Arndt et al, 2008). Stress may be lessened with cognitive behavioral therapy, hypnosis or self-hypnosis. Anxiolytics and antidepressants are employed for treatment of anxiety and depression respectively (Shenefelt, 2010).

3.3 Psoriasis

Psoriasis has a substantial effect on patients’ lives and can greatly increase the risk of suicide. Patients are often most troubled by the itching and scratching, bleeding, unsightly physical appearance, and noticeable flakes. The degree of pruritus in patients with psoriasis and AD is strongly correlated to depressive psychopathology. Both physical and mental functioning are reduced in patients with psoriasis comparable to that in arthritis, cancer, depression, and heart disease patients (Rapp et al, 1999). In a study of 369 patients with psoriasis, 35% reported that their condition affected their careers; 20% reported that they were
substantially impaired in performing their work (Finlay & Coles, 1995). Quality of life may be severely affected by the chronicity and visibility of psoriasis as well as by the need for lifelong treatment. Five dimensions of the stigma associated with psoriasis have been identified: (1) Anticipation of rejection, (2) feelings of being flawed, (3) sensitivity to the attitudes of society, (4) guilt and shame and (5) secretiveness (Ginsburg & Link, 1999).

Depressive symptoms and suicidal ideation is frequently associated in psoriasis (Schmitt & Ford, 2007; Esposito, 2006). Many have feelings of physical and sexual unattractiveness as well as helplessness, anger, and frustration. Shame or embarrassment with resultant secretiveness and avoidance of common social activities, like sports and swimming is not unusual. The disease is clearly associated with increased alcohol consumption and smoking (Herron et al, 2005).

Even though the emotional effects and functional impact of the disease are not necessarily proportionate to the clinical severity of psoriasis (Russo et al, 2004), the frequency of psychiatric disturbance decreases with improvement in the clinical severity and symptoms of psoriasis (Sampogna et al, 2007). The effect of the disease decreases with increasing age, probably a function of both disease duration and a more settled lifestyle. Women appear to report greater impairment of quality of life, while men report greater work-related stresses. While the severity of the condition can influence psychosocial well-being, it is important to appreciate that people perceive their conditions differently, such that those with only mild psoriasis can in fact be more bothered than those with extensive, severe disease. A questionnaire based study on 300 patients with moderate to severe chronic plaque psoriasis from 17 dermatology clinics throughout Italy revealed that psoriasis elicited anger, annoyance, and irritation in approximately 50% of the patients, whilst 38% of patients were unable to describe their emotional state. Aspects of life that were limited by psoriasis included clothing (57%), social interactions (43%), and personal hygiene (31%). The disease was often seen by patients as incomprehensible, incurable, and uncontrollable. More than half of the patients stressed their need to be listened to by the treating physician, and their wish that the physician should use simple language and should improve their psychological skills and interpersonal communication techniques. Dermatologists need to convey to patients with psoriasis the feeling of 'understanding the disease,' of hope about its curability, and the 'perception of control.' These elements should be taken into account when treating patients and whenever educational interventions are planned (Linder et al, 2009).

Proper medical treatment of psoriasis is important because it improves patients’ lives. The treatment itself can also affect quality of life based on efficacy, convenience, discomfort, and time commitment. In 40% to 80% of patients with psoriasis, stress is reported to influence onset and progression of the condition; direct and indirect suppression of the immune system is the most likely etiology (Barankin & Dekoven, 2002). Body image issues and stress may be improved with cognitive behavioral therapy, biofeedback, meditation, relaxation training or self-hypnosis. Self-hypnosis can reduce pruritus or itching and give a sense of greater self-control, which in turn can lessen the depression (Shenefelt, 2010). Psychological interventions and antidepressant medications may improve perceived symptom severity, quality of life and major compliance to the treatment in selected patients (suffering from psoriasis and mood disturbance), without a clinician necessarily being able to see an impact on psoriasis severity (D’Erme et al, 2012).
3.4 Alopecia areata (AA)

Psychologic factors may affect the development, evolution and therapeutic management of AA. Acute emotional stress may precipitate AA by activation of overexpressed type 2b corticotropin-releasing hormone receptors around the hair follicles leading to intense local inflammation (Katsarou-Katsari et al, 2001). Release of substance P from peripheral nerves in response to stress, and prominent substance P expression in nerves surrounding hair follicles has been reported in AA patients (Toyoda et al, 2001). Substance P degrading enzyme neutral endopeptidase has also been strongly expressed in affected hair follicles in the acute-progressive as well as the chronic-stable phase of the disorder (Toyoda et al, 2001). The hair loss can aggravate the stress, especially if the hair loss is visible (Shenefelt, 2010). Alexithymia and dissociative somatization was more common in adults with AA than in controls (Williamson et al, 2009). Comorbid psychiatric disorders are common and include major depression, generalized anxiety disorder, phobic states and paranoid disorder (Garcia-Hernandez et al, 1999). Self-image issues and stress may be treated with self-hypnosis (Shenefelt, 2010) or other stress reduction techniques.

3.5 Vitiligo

Stress can exacerbate vitiligo by changing immune function, increasing production of opioid peptides, increasing catecholamine release, and affecting other hormone pathways. Vitiligoin turn causes disfigurement, leading to increase in anxiety, embarrassment, self-consciousness and psychiatric morbidity along with low self-esteem (Lee & Koo, 2003). Younger patients and individuals in lower socioeconomic groups show poor adjustment, low self-esteem and problems with social adaptation (Porter et al, 1979; Koshevenko, 1989). Most patients with vitiligo report a negative impact on sexual relationships and cite embarrassment as the cause (Porter et al, 1990).

Psychiatric morbidity is typically reported in approximately one-third of patients (Padopoulos et al, 1998), but, in one study, 56% of the sample had adjustment disorder and 29% had depressive disorders (Mattoo et al, 2001). In depression-prone individuals, vitiligo can initiate or exacerbate depression, especially in darkly pigmented individuals (Dogra & Kanawar, 2002). The prevalence of depression in vitiligo patients was 39% in a recent quality of life study (Sampogna et al, 2008). Depression may be treated by antidepressants and cognitive-behavioral therapy (Papadopoulos et al, 1999). Hypnosis can also help to reframe the patient’s perspective on their depigmented lesions, lessening secondary depression (Shenefelt, 2010).

4 Dermatological Disease Influenced by Psychosocial Stress

Psychophysiologic disorders refer to those cases of bona fide skin disorder, such as urticaria, psoriasis, acne, AA, AD and rosacea that can be exacerbated by emotional stress in the patient. It is important to note that these disorders are not "caused" by stress, but are simply exacerbated by stress (Table 4) (Griesemer, 1978). Each of these conditions has "stress responders" and "non-stress responders," depending on whether a patient's skin disease is or is not frequently and predictably exacerbated by stress. In examining distressed patients with flare-up of a real skin disorder such as eczema, it is important to determine how much of the emotional distress is psychosomatic and how much of it is somatopsychic in nature. A psychosomatic problem refers to a situation whereby external stresses such as occupational dif-
Difficulty or family problems lead to worsening of the skin disease. Sometimes, both psychosomatic and somatopsychic elements may be active in creating a vicious cycle that perpetuates the flare up of the skin disease. It has been estimated that the effective management of at least one-third of patients attending skin departments depends to some extent upon the recognition of emotional factors.

### 4.1 Chronic urticaria

Like any chronic disease, it raises two principal problems: preservation of the quality of life and therapeutic compliance. In chronic urticaria, psychological factors intervene on several levels: the doctor-patient relationship, the urticarian crisis itself, the onset and/or the aggravation of the disease, and the psychosocial consequences of urticaria. The role of psychological factors in the onset and/or the aggravation of the disease are variously estimated, without consensus between the authors. Severe emotional stress may exacerbate preexisting urticaria (Rees, 1957). Increased emotional tension, fatigue, and stressful life situations may be primary factors in more than 20% of cases and are contributory in 68% of patients. Difficulties with expression of anger and a need for approvals from others are also common (Juhlin, 1981). Patients with this disorder may have symptoms of depression and anxiety, and the severity of pruritus appears to increase as the severity of depression increases (Gupta et al., 1994; Shiro et al., 1994). Quality of life is especially impaired. Treatments of chronic urticaria should combine dermatological treatment with prescription of psychotropic drugs (especially antidepressants), along with psychotherapy (a relaxation technique for example), without forgetting health education sessions (Consoli, 2003). Self-hypnosis can reduce pruritus or itching and give a sense of greater self-control, which can lessen the depression. Hypnosis has resolved some cases of chronic urticaria (Shenefelt, 2010).

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Proportion with emotional trigger (%)</th>
</tr>
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<tbody>
<tr>
<td>Hyperhidrosis</td>
<td>100</td>
</tr>
<tr>
<td>Lichen simplex chronicus</td>
<td>98</td>
</tr>
<tr>
<td>Rosacea</td>
<td>94</td>
</tr>
<tr>
<td>Dyshidrosis</td>
<td>76</td>
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<tr>
<td>Atopic dermatitis</td>
<td>70</td>
</tr>
<tr>
<td>Urticaria</td>
<td>68</td>
</tr>
<tr>
<td>Psoriasis</td>
<td>62</td>
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<tr>
<td>Papular acne vulgaris</td>
<td>55</td>
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<tr>
<td>Seborrheic dermatitis</td>
<td>41</td>
</tr>
<tr>
<td>Fungus infection</td>
<td>9</td>
</tr>
<tr>
<td>Nevi</td>
<td>0</td>
</tr>
<tr>
<td>Basal cell carcinoma</td>
<td>0</td>
</tr>
<tr>
<td>Keratoses</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 4: Incidence of emotional triggering of common dermatoses (N=4576) (Griesemer, 1978)
4.2 Herpes simplex
Stress frequently initiates or exacerbates herpes simplex cold sore virus recurrences (Buske-Kirchenbaum et al, 2001). Along with conventional antiviral treatments for the herpes, stress reduction techniques may be useful (Shenefelt, 2010).

4.3 Hyperhidrosis
Hyperhidrosis of hands, feet, axillae, or forehead is related to stress. Locally injected botulinum toxin can temporarily inactivate acetylcholine release from the nerves associated with sweating (Lowe et al, 2007). Stress reduction techniques including biofeedback are useful (Shenefelt, 2010).

4.4 Lichen planus
Lichen planus, an inflammatory pruritic dermatosis, is often triggered or exacerbated by stress. The intense itching and discoloration with hyperpigmentation that occur with lichen planus can further aggravate the stress. The stress may be reduced using relaxation, biofeedback, meditation, or self-hypnosis (Shenefelt, 2010).

4.5 Lichen simplex chronicus
Thickened plaques of lichen simplex chronicus are produced by rubbing or scratching the skin and are initiated or exacerbated by stress. Along with standard dermatological treatments, stress reduction is beneficial (Shenefelt, 2010).

4.6 Seborrheic dermatitis:
The scaling and itching of seborrheic dermatitis is frequently worsened by stress (Arck&Paus, 2006). In addition to conventional treatments, stress reduction techniques like relaxation, biofeedback, meditation, or self-hypnosis may be useful (Shenefelt, 2010).

4.7 Postherpetic neuralgia
Postherpetic neuralgia is a peripheral neuropathic pruritus, pain, or paraesthesia following herpes zoster. Topical treatment with capsaicin four or five times a day, which depletes substance P in the nerves, may be useful. Oral gabapentin also may help reduce the neuropathic sensations. Acupuncture and hypnosis have provided relief from pain or pruritus in some patients (Shenefelt, 2010).

5 Psychiatric Disorders with Cutaneous Manifestations
5.1 Psychotic Disorders
5.1.1 Delusions of parasitosis
Patients with delusions of parasitosis firmly believe that their bodies are infested by some type of organism. Frequently, they have elaborate ideas about how these "organisms" mate, reproduce, move around in the skin and, sometimes, exit the skin. These patients often present with the "matchbox" sign, in which
small bits of excoriated skin, debris or unrelated insects or insect parts are brought in matchboxes or other containers as "proof" of infestation (Chaudhury & Augustine, 1990). The psychiatric differential diagnosis includes schizophrenia, psychotic depression, mania with psychosis, drug-induced psychosis, and formication without delusion, in which the patient experiences crawling, biting and stinging sensations without believing that they are caused by organisms. Other organic causes such as withdrawal from cocaine, amphetamines or alcohol, vitamin B₁₂ deficiency, multiple sclerosis, cerebrovascular disease or syphilis should also be considered. If any of these underlying causes are diagnosed, a separate diagnosis of delusions of parasitosis should not be made. The treatment can be very difficult. Usually the patient had already consulted a number of physicians in a variety of specialities, undergone a multitude of diagnostic studies that revealed no abnormalities and sought help from non-medical sources. The greatest challenge in the treatment of delusional patients is to obtain their trust. It is important to avoid an argument because delusional patients cannot be argued out of their delusional belief system and this will only antagonize them and sabotage the doctor - patient relationship. These patients are frequently mistrustful of physicians. They often complain that the previous physician did not examine their skin adequately. Therefore, one of the best ways to gain their trust is to give them a thorough skin examination. The treatment of choice is pimozide, a high potency antipsychotic with antipruritic properties. The medication should be presented as a "therapeutic trial," and any contentious argument regarding the pathogenesis of the disorder or the mechanism of action of pimozide should be purposefully avoided. Encouragement suggesting that pimozide may "help one focus less on the skin and more on enjoying life" may help. Pimozide has been shown to be uniquely effective in the treatment of this condition, especially in decreasing formication (Srinivasan et al, 1994). Although delusional patients may agree to take psychotropic medication, they are frequently ambivalent about doing so. Therefore, if the patient should develop side effects such as stiffness or restlessness, they are liable to stop the entire treatment and never agree to take psychotropic medication again. It is important to inform patients about the side effects and to start with a low dose which is slowly titrated upward to minimize the risk of side effects. However, pimozide has a significant broad spectrum of adverse effects including extrapyramidal and cardiac side effects. Therefore, atypical antipsychotics (olanzapine, risperidone) which have considerably fewer side effects are increasingly preferred. The dosage of antipsychotic drug for treatment of delusions of parasitosis is much lower than that used for schizophrenia. Optimal therapeutic effect may not occur for 6 to 8 weeks. During the treatment course, patients become less agitated. The antipsychotic drug can be continued at the lowest effective dosage for several months and gradually tapered off without necessarily inviting the recurrence of symptoms. If the condition recurs, another course of antipsychotic therapy can be instituted.

5.1.2 Other delusional disorders, somatic type

In the delusional variant of body dysmorphic disorder, the preoccupations with a defect in appearance are of delusional intensity, although the distinction between an obsessive concern and delusion is not always clear. The disorder may respond preferentially to a selective serotonin reuptake inhibitors (SSRI), and if a patient does not completely respond to an SSRI, the addition of an antipsychotic may help. The delusion of a foul body odor (delusion of bromosis) is another encapsulated somatic delusion that a dermatologist may encounter. Treatment data are limited, but antipsychotics may be effective.
5.2 Somatoform Disorders

5.2.1 Body Dysmorphic Disorder, Dysmorphophobia or Dermatological Non-Disease

These patients are preoccupied with the idea that they are physically misshapen. This preoccupation, often involves in particular the face in women, and the scalp and genitalia in men. Facial symptoms include excessive redness, blushing, scarring, large pores, facial hair and protruding or sunken parts of face. Other symptoms are hair loss, red scrotum, urethral discharge and herpes and AIDS phobia. Strategies to relieve the anxiety due to the perceived defects may include camouflaging the lesions, mirror checking, comparison of ‘defects’ with the same body parts on others, questioning/reassurance seeking, mirror avoidance and grooming to cover up ‘defects’ (Phillips & Dufresne, 2000). Patients with body image disorders, especially those involving the face, may be suicidal (Koblenzer, 1985). Associated comorbidity in dysmorphophobia may include depression, impairment in social and occupational functioning, social phobias, OCD, skin picking, marital difficulties and substance abuse (Phillips & Dufresne, 2002). The disorder was found in 14% of dermatology outpatients and 10% of cosmetic surgery patients with a gender ratio of 1. These patients usually refuse psychiatric treatment. SSRI are effective in reducing symptoms in at least 50 percent of cases although Tricyclic Antidepressants (TCA), Mono Amino Oxidase Inhibitors (MAOI) and Pimozide have also been reported to be useful (Saini et al, 2004).

5.2.2 Chronic idiopathic pruritus

Although pruritus is a common and distressing symptom, its pathophysiology is not completely understood. In histamine-induced pruritus, psychic trauma lowers itch threshold, aggravates itch intensity, and prolongs itch duration. Recent stressful life events have also been correlated with an increased ability to detect itch. In psoriasis, AD and chronic idiopathic urticaria a direct correlation between pruritus severity and the degree of depressive symptoms was seen, possibly due to reduced itch threshold (Gupta & Gupta, 2003). Psychiatric factors may influence the perception of itch by several mechanisms. The hypothalamus and other components of the limbic system may modulate sensory perception through the sensory cortex, and elevation of corticotrophin releasing hormone in some depressed patients may increase central nervous system opiate levels, enhancing the perception of pruritus. Neuropeptides, such as substance P, released in response to stress also produce itching. Chronic idiopathic pruritus and idiopathic pruritus ani, idiopathic pruritus vulvae, and idiopathic pruritus scroti have frequently been called psychogenic, but more study is needed to determine how psychiatric and other CNS disorders contribute to the development of pruritus. Antidepressant medications, particularly TCAs, can relieve pruritus of many origins. Behavioral treatment aimed at interrupting the itch-scratch cycle may also be important.

5.2.3 Somatoform Pain Disorder

Glossodynia

Glossodynia (burning mouth syndrome) is an unexplained prolonged sensation of pain or burning inside the oral cavity, most frequently at the tip and lateral borders of the tongue, along with dryness, paraesthesia, and changes in taste and smell. Psychiatric factors like anxiety, depression and stressful life events play a role in many patients with glossodynia. In open trials antidepressants (TCAs, SSRIs and MAOIs) and benzodiazepines have shown beneficial effects. Gabapentine may be an option.
Vulvodynia

Vulvodynia is a chronic vulvar and perineal discomfort of variable severity with burning, stinging, irritation and rawness. It is postulated that essential or dysesthetic vulvodynia results from a problem with cutaneous perception, either centrally or at the nerve root. It is more frequent in perimenopausal or postmenopausal women and is characterized by constant vulvar or perineal discomfort, as well as frequent urethral and rectal discomfort. Patients may respond to treatment with TCAs. Gabapentin may be an alternative.

5.3 Obsessive-Compulsive Spectrum Disorders

5.3.1 Psychogenic excoriations

Psychogenic excoriations (Neurotic excoriations, acne excoriee, pathological or compulsive skin picking, and dermatotillomania): is characterized by excessive scratching or picking of normal skin or skin with some inconsequential irregularity e.g. insect bite, folliculitis or acne. The distribution is bilateral, symmetrical, and accessible to the fingers; most commonly, lesions are on the face, upper back, chest, and extremities. Lesions are present in all stages of evolution and may range from small circular crusted papules to deep craters with hypertrophic borders. The skin picking is an impulsive reaction and does not belong to the obsessive-compulsive spectrum disorders: impulsivity is defined by ineffective or failing control resulting in uninhibited behavior (Misery et al, 2012). Co-morbid depressive and anxiety disorders are common (Calikusu et al, 2003). Patients respond to treatment with doxepin, clomipramine, and SSRIs. There are case reports of successful treatment with olanzapine, pimozide, naltrexone and behavioral therapy.

5.3.2 Trichotillomania

Trichotillomania is a condition in which a person pulls out his or her own hair. The peak onset is in childhood with a female to male ratio of 5:1. Hair is plucked in a wave-like pattern from a single point, either in ever-expanding circles or from front to back. Though eyebrows, eyelashes, pubic or torso hair may be pulled, scalp hair is the most common. The scalp itself is normal, but within the patch the hairs are sparse and of differing lengths, depending on the phase in the plucking cycle. The extracted hair may also be chewed or swallowed (trichophagia), leading to trichobezoars (Chaudhury et al, 2001; Chaudhury et al, 2003). The most common underlying psychopathology is obsessive-compulsive disorder. The other possible underlying psychiatric diagnoses include simple habit disorder, reaction to situational stress, mental retardation, anxiety, mood disorder, substance use, eating disorder and delusions in which the patient pulls out his or her hair based on a delusional belief that something in the roots needs to be ‘dug out’ so the hair can grow normally. This latter, rare condition is called ‘trichophobia’ (Gupta et al, 1990). Childhood trauma and emotional neglect may play a role in the development of this disorder (Lochner et al, 2002). The patients experience an increasing sense of tension immediately before an episode of hair pulling and when attempting to resist the behavior, they feel relieved of tension and sometimes a feeling of gratification after hair pulling (Enos & Plante, 2001). Trichotillomania is one of the rare conditions in which pathologic examination of the skin can be diagnostic. The hair root undergoes a unique change called trichomalacia, which only occurs in patients with trichotillomania. Thus, if the patient denies pulling his or her own hair, a skin biopsy can be helpful in determining the diagnosis. It is not always easy to
convince the patient or parent that the problem is emotional rather than dermatological. At first a therapeutic relationship should be established in which the patient can be helped to accept appropriate treatment. SSRIs and clomipramine, in dosages appropriate for the treatment of obsessive-compulsive disorder, have positive treatment effects on trichotillomania. When itching is a feature, Doxepin may be the better choice. In resistant cases SSRI augmentation with pimozide, olanzapine or risperidone may be effective. The nonpharmacologic approach includes cognitive-behavior therapy with habit reversal (Keuthen et al, 1998).

5.3.3 Onychophagia

Onychophagia or repetitive nail biting is a common behavior that can begin as early as 4 years, with a peak between the ages of 10 and 18 years, and appears to be familial. Severe onychophagia can lead to significant medical and dental problems, such as hand infection and craniomandibular disorders. Onychotillomania, the picking or tearing of the nail, is a variant. The disorder responds to clomipramine or an SSRI. Behavioral therapy may be efficacious (Shenefelt, 2010).

5.4 Factitious Disorder and Malingering

5.4.1 Factitial dermatitis

Factitial dermatitis (dermatitis artefacta) is defined as all dermatological, self-inflicted skin lesions, where the patient denies having produced the lesions. Lesions consist of excoriations, blisters, purpura, ulcers, erythema, edema, sinuses and nodules. Methods used by patients include rubbing, scratching, picking, cutting, puncturing, sucking, biting, occlusion, application of suction cups, or dye or heat or caustic substances to the skin (Koblenzer, 2000). Skin damage can be extensive with full thickness skin loss requiring plastic surgery and even amputation. Despite the variety of skin lesions, they have some common features. Affected sites tend to be easily accessible to the patient and are more prominent on one side of the body depending on the handedness of the patient. The condition is more common in women than in men (3: 1 to 20: 1) (Gieler et al, 2013; Mohandas et al, 2013; Van Moffaert et al, 1985). The disorder often begins after severe psychological stress, usually involving loss, threatened loss or isolation. The most common co-morbid psychopathology is borderline personality disorder. However, some patients with borderline personality disorder readily acknowledge that they damage their skin in an impulsive act that resembles obsessive compulsive spectrum disorders and they respond to SSRIs. Other associated conditions include OCD, anxiety, depression, psychosis and mental retardation, and most of the patients with factitious dermatitis have some sort of personality disorder and they often use some means to damage his or her own skin, such as burning cigarettes, chemicals or sharp instruments (Koblenzer, 2000; Gieler et al, 2013; Mohandas et al, 2013; Van Moffaert et al, 1985). The management of factitious dermatitis involves the development of an empathic therapeutic relationship between the dermatologist and the patient. Because the patients deny the self-inflicted nature of the lesions, they usually do not immediately accept a referral to a psychiatrist and direct confrontation may disrupt the doctor patient relationship. However, once a therapeutic relationship has been established, some patients will accept a psychotherapeutic approach. The prognosis varies; some cases resolve after a brief episode, whereas others become lifelong problems.
5.4.2 Munchausen’s syndrome

Munchausen’s syndrome is a psychiatric disorder where psychopathic behavior exists without any intention to gain something, except maybe a doctor’s or nurse’s attention. Skin lesions such as non-healing wounds, widespread blistering and multiple excoriations may be part of the syndrome of simulated disease. In the syndrome of Munchausen’s by proxy the illness is fabricated by the parent, usually mother, or someone in loco parentis. Munchausen’s by proxy can also be seen in the elderly, mentally handicapped or other dependent persons.

5.4.3 Malingering

In malingering the actions such as imitation or encouragement of illness are voluntary, with specific intention to gain something e.g. absenteeism. Cutaneous lesions are usually crude forms of artifact dermatitis. Most patients have borderline or paranoid personality disorder. Treatment is difficult and compliance erratic (Van Moffaert et al, 1985).

5.5 Depressive Disorders

Depressive disorders are more common in the population affected with dermatologic disorders. Comorbidity of depression and dermatologic disorders is around 30%. The correlation between depressive and dermatologic disorders still remains unclear. In depression and dermatology disorders in which certain precipitating factors are required thereby causing alteration of the patient's immunological identity causing a combination of hereditary features and ones acquired through adaptation occur to cause the disorder to develop. The cytokines are vital in the regulation of the immunology response and are also mediators of non-infective inflammatory processes leading to recurrent hormonal secretion affecting the function of the vegetative and central nervous system leading to so called "sickness behaviour", marked by loss of appetite, anhedonia, anxiety, decrease of concentration and interest along with other changes which generate a picture of depressive disorder (Filaković et al, 2009).

A number of investigators have found an association between skin disorders, particularly itching, and depression. The itching can be localized or generalized. Histamine, vasoactive neuropeptides and mediators of inflammation may be liberated by stress, while stress-related hemodynamic changes, variations in skin temperature and the sweat response may all contribute to existing pruritus. Scratching, a common behavioral response to stress, may compound the problem (Gupta & Gupta, 2003). A relationship of atypical pain syndromes to depressive personality structure has been hypothesized (Blumer & Heilbronn, 1984). Some cases of atypical facial pain and glossodynia fall into this category. Burning feet and possibly some cases of post-zoster neuralgia may also be included. Atypical pain syndromes are most common in women past middle life and in many cases patients exhibit a gratifying response to antidepressants. It is important to remember that steroids and antihistamines used in the treatment of skin conditions may play a role in the pathogenesis of depression and anxiety.

Depressive disease in dermatology patients can be associated with increased prevalence of suicidal ideation and substantial risk of suicide. A 5.6-7.2 % prevalence of active suicidal ideation was observed among psoriasis and acne patients which was higher than the 2.4-3.3 % prevalence of suicidal ideation observed in general medical patients (Gupta & Gupta, 2003). A substance abuse disorder such as alcohol abuse in the psoriasis patient also increases suicidal risk.
5.6 Anxiety Disorders

The physiological manifestations of anxiety disorder include increased sweating and clammy hands and feet which may present to the dermatologist. Anxiety may exacerbate disorders like psoriasis or atopic dermatitis. Having a skin disorder may induce anxiety in susceptible individuals (Shenefelt, 2010). A recent study reported that 13% of patients at a dermatology clinic had an anxiety disorder (Seyham et al, 2006).

5.7 Eating disorders.

Malnutrition is associated with fat tissue reduction, dry skin, purpura, petechiae, brittle hair and nails, alopecia, angular cheilitis and acneform eruptions. Recidivating self-induced vomiting causes teeth enamel erosions, gingivitis and facial purpura. The skin involvement has been linked to core ego deficits and may be an index of severity in overall body image disturbance (Jaffernay, 2007; Struma, 2005).

5.8 Alcohol and Substance Abuse

Alcoholism is connected to facial erythema, teleangiectasias, xeroderma, pruritus, urticaria, palmar erythema, cherry hemangioma, spider nevus, jaundice, hyperpigmentation and hypopigmentation. Disease states related to alcohol abuse include psoriasis, porphyria cutanea tarda, nutritional deficiencies and basal cell carcinoma (YamilaMurga et al, 2009). Smoking is strongly associated with numerous dermatologic conditions including poor wound healing, wrinkling and premature skin aging, squamous cell carcinoma, psoriasis, hidradenitis suppurativa, hair loss, oral cancers, and other oral conditions. In addition, it has an impact on the skin lesions observed in diabetes, lupus, and AIDS. The evidence linking smoking and melanoma, eczema, and acne is inconclusive (Freiman et al, 2004). Cutaneous signs of drug abuse include skin granulomas, ulcerations, recurrent infections as well as the residual scarring at the injection site (Liu et al, 2010).

6 Skin Disease and Sexuality

Beautiful skin is erotic and attractive and elicits a desire in the observer to touch it, while ugly skin often causes feelings of disgust, aversion and repugnance. Clinical experience shows that attention is usually paid to the sexual aspects of the skin only in venereal diseases or when the sexual organs themselves are involved. Even in such cases medical interest is concentrated on the skin lesions and less on the effects on the patient’s sex life. Fifty three patients with psoriasis, 24 with atopic dermatitis and 52 controls with healthy skin were compared with regard to their sexual behavior. Patients with skin disease had significantly impaired sex lives compared to those with healthy skin. There was a highly significant reduction in the exchange of tenderness in patients of both sexes and in the capacity for orgasm in female patients, but no significant difference was found in the frequency of intercourse. Patients with psoriasis felt more impaired that those with atopic dermatitis. Ninety three percent of psoriatics and 96% of patients with atopic dermatitis had not been asked about their sexual life by their attending doctor (Niemer et al, 1997).
7 Management

Prior to discussing therapeutic options, it should be recognized that, if at all possible, psychodermatological cases should be referred to a psychiatrist. However, this referral process may be most optimally conducted if the dermatologist has also expressed his willingness to follow the patient with the psychiatrist so that the patient does not feel “abandoned”. Although half of all prescriptions for psychotropic medications are written by nonpsychiatrists, dermatologists receive little training in prescribing such drugs (Lochner et al, 2002). However, in situations where referral to a psychiatrist is not feasible, it is within the scope of acceptable dermatological practice to try to address the psychosocial aspects of the patient’s care as long as the dermatologist is knowledgeable and competent in the care given the patient. It is recognized that, within the limited setting of a dermatology practice, judicious, knowledgeable, and responsible use of psychopharmacology may be more helpful to the patient than to ignore the psychodermatology problem (Koo et al, 2003). The provision of a multidisciplinary liaison clinic within a dermatology department in a university setting may be a particularly useful way of obtaining skilled psychiatric help for the patient. The experience of some of these clinics has recently been published (Chung et al, 2012; Orion et al, 2012). The majority of patients in a Singapore Psychodermatology clinic were diagnosed with either a psychophysiological disorder or a primary psychiatric disorder. The most common diagnosis among patients with primary psychiatric disorder was delusions of parasitosis. Other common primary psychiatric disorders seen were trichotillomania and dermatitis artefacta. About a fifth of the patients had psychiatric disorders resulting from their underlying dermatological conditions. A third of the patients were lost to follow-up. The authors conclude that managing patients with psychocutaneous disorders can be challenging, with many patients defaulting treatments. Psychodermatology clinics would benefit both patients and their caregivers. A collaborative approach using a consultation-liaison relationship between two medical departments in a friendly environment would result in more effective, integrated and holistic treatment strategies for such patients (Chung et al, 2012). During a 3-year period, 124 patients were seen in a new psychodermatology clinic in Israel, presenting with a vast array of dermatologic complaints. A major observation was that lack of proper patient-doctor communication resulted in the development of misconceptions about the disease, low compliance, and even long-lasting psychological difficulties. Another important observation was that there is a true need for such a clinic, among patients as well as among their doctors (Orion et al, 2012).

In patients with treatment-responsive skin conditions such as AD, psoriasis and acne, the issue of stress may not be important. However, when physicians are faced with disease recalcitrant to treatment, patients should be asked whether psychological, social or occupational stress might be contributing to the skin disorder. Emotional stress may exacerbate many chronic dermatoses and can initiate a vicious cycle referred to as the "itch-scratch cycle"; therefore, treatment of recalcitrant patients with chronic dermatoses may be difficult without addressing stress as an exacerbating factor. Patients often are embarrassed about discussing psychological issues, especially if they feel hurried. Stress management classes, relaxation techniques, biofeedback, meditation, self-hypnosis, music or exercise may benefit these patients. If a specific psychosocial or occupational issue exists, therapy or counseling can help. When the patient's stress or tension is intense enough to warrant consideration of an anti-anxiety medication, two general types are available. Benzodiazepines, which can be used on an as-needed basis, provide relatively quick relief from anxiety, stress and tension. For treatment of chronic anxiety, SSRIs are safe and effective. Other options for the treatment of chronic stress include non-
sedating and non-addictive anti-anxiety agents such as buspirone. If a patient's anxiety disorder warrants psychiatric referral, the referral should be discussed with the patient in a supportive and diplomatic way so that the patient is able to accept the referral as an adjunct to continuing dermatologic therapy. On the other hand, if the condition is mainly somatopsychic, this fact may provide justification to pursue a more aggressive form of treatment either by using stronger topical agents or by introducing systemic medication. Although the approach to patients may differ depending on whether the emotional distress is primarily psychosomatic or somatopsychic in nature, both types of patients can be helped by the use of anxiolytic medication (Gil et al., 1987; Gupta et al., 1989). Treatment of depressive and dermatologic disorders is complex and requires an integral therapeutic approach encompassing all aspects of both disorders and their co-morbidity. Therefore therapeutic success lies in a team approach to the patient under the auspices of consultative-liaison psychiatry by setting the frame for efficient collaboration and bridging the gap between the mental and the physical in everyday clinical practice (Filaković et al., 2009).

To summarize the following therapeutic options are available to the dermatologist or, better, can be made available through a referral.

- **Empathy**: Ensure that patients feel heard and feel that their concerns are validated. Spend extra time with patients, particularly during initial diagnosis or exacerbations. Enquire about the psychosocial and economic effects of skin disease.

- **Education**: Discuss the natural history, medical management, and prognosis of skin disease. Dispel common misconceptions. Offer an informative handout describing the condition or refer patients to support groups for psychodermatological patients.

- **Psychopharmacology**: The use of psychotropic medications requires ongoing monitoring for efficacy and side effects. If one psychotropic medication does not work adequately then it is recommended that the dose be optimized or a different agent may be tried. Commonly used medications include:
  - **Antianxiety agents**: alprazolam, buspirone, lorazepam.
  - **Antidepressants**: doxepin, fluoxetine, sertraline.
  - **Antipsychotics**: for delusions: pimozide, olanzapine, risperidone.
  - **Anti-obssesive-compulsive medications**: fluoxetine, clomipramine, paroxetine.

- **Behaviour therapy**: Behaviour therapy for patients with recalcitrant behavior disorders, such as itch-scratch cycle or chronic picking, a referral to a behaviorist may be indicated in addition to other treatment modalities.

- **Psychotherapy**: Psychotherapy is usually not feasible for a dermatologist due to lack of training and time and referral to a therapist could be useful.

- **Stress reduction**: Various methods of stress reduction such as relaxation, biofeedback, meditation, self-hypnosis, exercise, etc., can be helpful when anxiety and stress are prominent elements in the patient's overall clinical picture. No specific pharmacological interventions are as yet available to prevent or treat skin disorders triggered by stress. However, based on recent advances in neuroimmunology, reasonable pharmacological treatment options are slowly emerging. Abrogation of mast-cell activation seems to be a promising approach in this endeavor, but few if any clinically available molecules can effectively inhibit mast-cell activation. Disodium cromoglycate was shown to inhibit rodent mast cells but was a very weak inhibitor of mast-cell cytokine release (Kempuraj et al., 2002). Certain flavonols, such as quercetin, are powerful inhibitors of...
both pre-stored and newly synthesized mediators from mast cells. The combination of such flavonoids with proteoglycans, such as chondroitin sulphate, appears to provide synergistic efficacy by inhibiting both activation and secretion of mast cells (Theoharides & Bielory, 2004; Arck et al, 2006). Appropriate CRH-R antagonists, when available, might also provide a unique therapeutic approach in skin conditions precipitated or worsened by stress. Further, the prototypic stress-associated neuropeptide SP may be blocked by the application of a high-affinity neurokinin-1 receptor antagonist. Thus, neurokinin-1 receptor antagonists might be useful in alleviating stress-induced hair loss and skin inflammation (Arck et al, 2006). Apart from and in addition to the above therapeutic options, it is also important to recognize that how the dermatologist interacts with the patient has important positive (or negative) management implications (Koo et al, 2003).

8 Conclusion

Psychocutaneous diseases encompass a complex and diverse group of disorders. Patients with psychocutaneous disorders usually present to dermatologists for management. These patients can be particularly difficult to manage as they are often reluctant to seek psychiatric treatment. Patients may be more willing to accept a psychiatric evaluation if a psychiatrist is working within the dermatology clinic. In a study of dermatology-liaison clinic, most of the psychiatric workload involved the treatment of comorbid depressive and anxiety disorders. Furthermore, most of the patients who were seen in the liaison clinic responded well to psychiatric treatment. However, most communities do not have psychiatrists available to perform a liaison function within dermatology settings and the situation is unlikely to change in the foreseeable future (Arnold, 2005). This emphasizes the need for liaison between the specialties of psychiatry and dermatology. Such collaboration will help alleviate the suffering of many patients whose underlying illnesses may not have been otherwise clearly identified and appropriately treated.

References


