Psoriasis

9

Christina George and Anthony Bewley

Aetiology

Psoriasis is a common autoimmune inflammatory condition of the skin, affecting approximately 125 million people worldwide, approximately 2–3% of the total population.

It is a multisystem condition which poses an increased risk of psoriatic arthritis, inflammatory bowel disease, cardiovascular disease, diabetes and lymphoma. It is known to cause substantial disability, akin to those caused by conditions such as cancer, arthritis, heart disease and diabetes. Psoriasis is associated with profound psychosocial comorbidity with a burden that extends well beyond the physical signs and symptoms. Psoriasis not only results in these negative psychosocial consequences, but paradoxically can be exacerbated by them, leading to a complex and destructive negative cycle affecting the skin and mental health.

Psychiatric Comorbidities

Psychosocial comorbidity is common in patients with psoriasis, and the most common of these include anxiety and depression, suicidal ideation and substance misuse.

C. George
Charing Cross Hospital, London, UK

A. Bewley (✉)
Barts Health NHS Trust, London, UK

Queen Mary University of London, London, UK
e-mail: anthony.bewley@nhs.net

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Anxiety and Depression (Fig. 9.1)

There is a significant prevalence of anxiety and depression in patients with psoriasis. Studies have shown that between 10% and 40% of patients experience depression, with a 72% higher prevalence in those with more severe disease. Approximately 31% of patients experience symptoms of anxiety. Psoriasis has been shown to cause greater psychological distress than those with fungal infections and vitiligo. A study by Fortune et al. in 2000 showed that 38% of psoriasis patients have features of pathological worry, and 25% fulfilled the criteria for generalised anxiety disorder. Interestingly, this seems to be irrespective of symptoms or their frequency. Anxiety appears to be related to concerns regarding societal beliefs, and worry that their own anxiety was the main cause of their psoriasis. In women, pathological worry appears to be more prevalent and is not always related to the degree of skin severity.

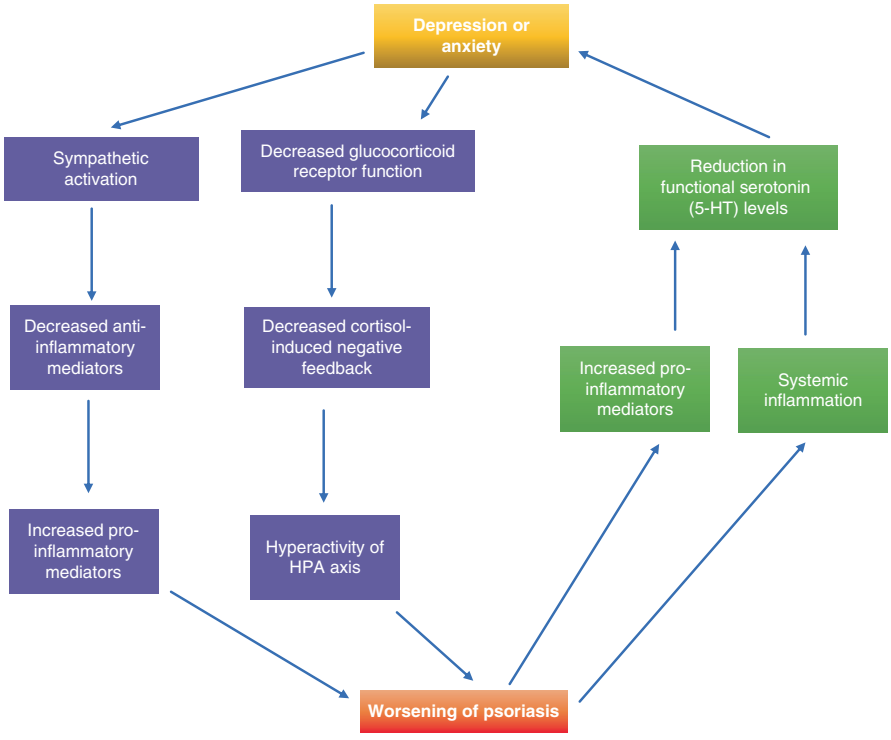

Fig. 9.1 The relationship between psoriasis and depression or anxiety *(from El Sayed et al. 2018). 5-HT* 5-hydroxytryptamine (serotonin), *ACTH* adrenocorticotropic hormone, *CC16* uteroglobin, *CRH* corticotropin-releasing hormone, *HPA* hypothalamic–pituitary–adrenal. https://www.emjreviews.com/dermatology/article/beneath-the-skin-the-relationship-between-psychological-distress-and-the-immune-system-in-patients-with-psoriasis/

The Brain–Skin Axis (Table 9.1)

Whilst it is known that patients with psoriasis may experience mood disturbance as a consequence of the impact on their skin, it is also well recognised that psychological distress can have a negative pathological impact on cutaneous stability, often resulting in worsening of the condition. There is evidence that psychological distress can both drive skin and systemic inflammation as well as being a cause (Table 9.1); in practice, this can result in a vicious cycle of poor skin condition and mental health (Fig. 9.1).

Hypothalamic–Pituitary–Adrenal (HPA) Axis (Fig. 9.2)

The mechanism by which activation of the HPA axis could lead to worsening psoriasis remains yet to be fully elucidated. It is known that stress results in activation of the hypothalamic–pituitary axis (HPA); this causes an upregulation of Corticotrophin-releasing hormone (CRH), resulting in a downstream increase in adrenocorticotropic hormone (ACTH), glucocorticoids and neuropeptide mediators. The effect of the glucocorticoids is to inhibit IL-12, IFN-γ and TNF (via T-Helper 1 cells), and to upregulate IL-4, IL-10 and IL-13 (via T-Helper 2 cells), as well as resulting in a general shift from TH-1 to TH-2 regulated immune profile. CRH itself also stimulates a pro-inflammatory response which is likely to contribute to a cumulative inflammatory effect. In addition, neuropeptides such as Substance-P (SP) and Nerve growth Factor (NF) are involved in communication between the neuronal and immune system. The skin is responsive to the central stress response via a peripheral HPA axis and therefore it is pathophysiologically feasible that a central stress response could result in an effect on the skin.

Paradoxically, the peripheral HPA axis in the skin may directly affect the central HPA axis. IL-1 and IL-6 (upregulated in psoriasis) are known to upregulate the expression of CRH which in turn activate the central stress response, and other pro-inflammatory cytokines are also activated in the skin, all of which result in central HPA activation which could induce symptoms including depression and anxiety.

Sympathetic–Adrenal–Medullary Axis

The sympathetic–adrenal–medullary axis is activated as a fast-response to stressful stimuli. This axis activation results in an increase in catecholamines such as noradrenaline which decrease anti-inflammatory mediators and active pro-inflammatory mediators. CD4+ lymphocytes are activated and lymphocytes are trafficked into the skin. These effects are associated with psoriatic plaque formation.

Brain Changes

Patients with psoriasis have higher rates of depression and anxiety than those with other severe skin conditions, suggesting that there may be physiological brain changes specific to psoriasis which may account for the significant psychosocial morbidity found specifically in this condition.

Table 9.1 The relationship between psychological distress and inflammation

Inflammation causing psychological distress	Psychological distress causing inflammation
Mice models exposed to pro-inflammatory IL-1 have exhibited more symptoms of depression, and those treated with anti-17A were less likely to have these symptoms.	Human studies have shown increased levels of IL-1B, IL-6 and TNF-a following psychological distress Stress is also known to increase levels of pro-inflammatory markers IL-1 and IL-6 in animal models, which correlate with increased symptoms of depression These inflammatory markers have been linked to psoriatic plaque formation
In cancer patients exposed to pro-inflammatory interferon +/− IL-2, there was greater psychological distress, suggesting that these pro-inflammatory cytokines drive psychological distress.	Hypothalamic–Pituitary Axis (HPA) hyperactivity, resulting in higher levels of Corticotropin-Releasing Hormone (CRH) is commonly seen in depression. CRH stimulates pro-inflammatory cytokines (IL-6 and IL-11). Psoriatic plaques express higher levels of CRH than in unaffected skin, suggesting a possible causal association.
Inflammation can lead to a reduced level of functional serotonin, increases its breakdown and inhibits serotonin receptors. This powerful combination of actions could explain the reason why depression in these cases can be resistant to treatment.	HPA hyperactivity seen in depression results in higher baseline cortisol levels; however, this results in a saturation of the anti-inflammatory mineralocorticoid receptors (which exhibit their action via a negative feedback loop), resulting in a reduced ability to regulate corticosteroid levels. This effect results in desensitisation to the anti-inflammatory effects of cortisol. Patients with psoriasis who identify stress as a trigger for their skin to flare, show blunted cortisol levels in response to stress, which may be a consequence of this desensitisation. This leads to increased CRH via a negative feedback loop, resulting in pro-inflammatory effects.
Treatment of inflammation, for example, in patients taking anti-TNF treatment, has shown a significant improvement in depression when compared to placebo, irrespective of clinical severity. This finding suggests that treating systemic inflammation is important in treating the psychological distress, and thus may indicate a causal factor.	Psoriasis patients have been shown to have higher levels of noradrenaline in response to stressful situations. Noradrenaline is pro-inflammatory via IL-6 and TNF-a which could explain why psoriasis flares in response to stress.
Treatment of psoriasis with anti-IL-23 and IL-12 biologics has also shown a significant improvement in symptoms of depression	In a group of patients whose psoriasis was felt to flare due to stress, those whose depression responded to tricyclic antidepressant medication, exhibited a reduction in pro-inflammatory mediators such as IL-6, TNF-a and IL-1B. Similar findings have been demonstrated in those treated with other classes of antidepressant medication.

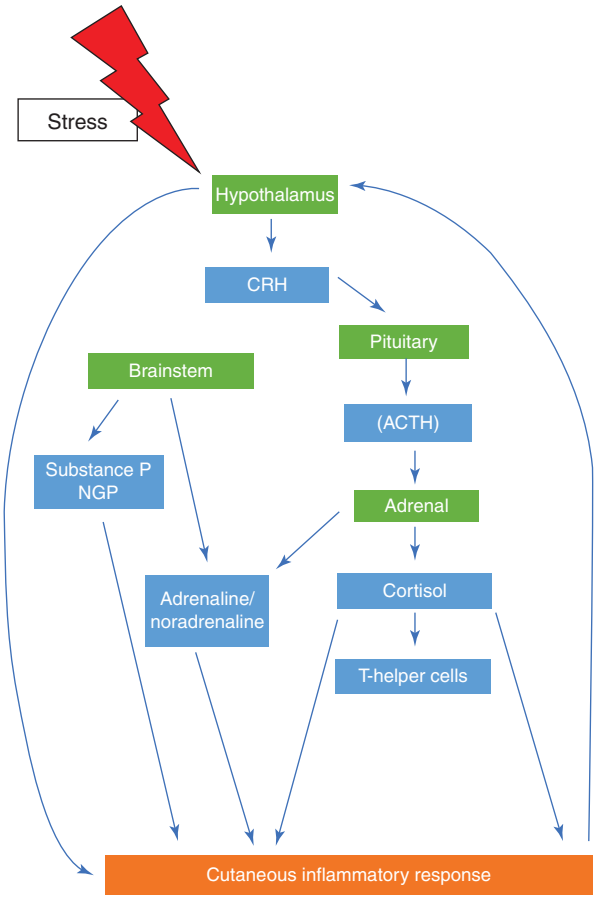

Fig. 9.2 The brain–skin axis. *ACTH* adrenocorticotropic hormone, *NGF* nerve growth factor, *SP* substance-P, *Th 0-2* T-helper: 0-2 cells, *CRH* corticotropin-releasing hormone, ? upregulation of CRH by the cutaneous inflammatory response

Research performed by Kleyn et al. using functional magnetic resonance imaging (MRI) studies have shown brain changes which are specific to patients with psoriasis. In one study, 26 male patients (13 with psoriasis and 13 controls) were shown images of disgusted faces. Those with psoriasis had significantly less activity in the bilateral insular cortex (which is known to be activated in response to the feeling and observation of disgust); the authors hypothesise that this may reflect a learned coping mechanism to self-protect from exposure to disgusted facial expressions. Interestingly, more recent work by this group investigating potential neuroinflammatory changes using positron emission tomography (PET) scanning found no significant differences in neuroinflammatory signals between psoriasis patients and controls. This may suggest that the brain is protected from the effects of peripheral inflammation via the blood-brain barrier, or it might be that this mode of imaging was not sensitive enough to pick up inflammatory changes. This is a relatively new and unknown area of interest and remains the subject of ongoing research.

Suicide

Despite a scarcity of high-quality evidence, patients with psoriasis seem to have a higher risk of suicidal ideation, and of attempts and completed suicide.

One study has shown up to a 44% higher rate of suicide compared with the general population. In those with severe disease, there is reported to be a 69% greater likelihood of attempting suicide, and a 30% greater likelihood of completing suicide, despite controlling for possible confounders.

Alcohol and Smoking Misuse

There is a high rate of alcoholism and alcohol misuse in patients with psoriasis, and this appears to positively correlate with the severity of psoriasis. The reasons for this are many but in part are seen to be a coping mechanism for dealing with the distressing psychosocial effects of this condition. In a large cohort of psoriasis patients who were admitted to hospital in Finland between 1973 and 1995, there was a higher than expected mortality rate in the psoriasis cohort, and the highest rates were alcohol related.

Alcohol can have a direct effect on the skin, with higher intake resulting in greater severity, and abstinence resulting in improvement and sometimes even remission. Excess alcohol can also complicate suitability for systemic treatment and adherence to treatment, and therefore patients should be encouraged to limit their intake to healthy quantities.

Smoking has been reported to be twice as prevalent in psoriasis patients compared to controls, and there appears to be an increased standardised mortality ratio in alcohol and smoking-related causes. One study has shown a trend towards a higher risk of psoriasis in current smokers and drinkers, and a higher still trend in those with a higher usage.

Practice Point
The prevalence of psychosocial comorbidities in patients with psoriasis is high. The reasons for this are complex and may be due to organic physiological brain and hormonal changes, as well as due to the effect of the condition itself. Clinicians should actively seek out signs of psychosocial comorbidity when treating these patients.

Quality of Life

Many patients with psoriasis report a significant impact on their quality of life. The World Health Organization (WHO) describes the quality of life as *'an individual's perception of their position in life in the context of culture and value systems in*

which they live and in relation to their goals, expectations, standards and concerns … It is a concept affected by the person's physical health, psychological state, personal beliefs, social relationships and relationship to salient features in their environment.'

Physical Factors (Table 9.2)

The physical factors in psoriasis can have a severely detrimental effect on the quality of life, with studies reporting that two-thirds of patients feel the negative physical impact of psoriasis in their everyday lives. This rises to up to 80% in those with severe disease.

The physical symptoms of their skin are a significant factor in the negative effects on quality of life, and these include itching, pain, irritation and the functional inability of the hands and feet.

In addition, the physical impact of co-existing psoriatic arthritis has the potential to cause devastating effects on quality of life. Other associated comorbidities such as obesity, metabolic syndrome and autoimmune conditions such as Crohn's disease may all result in physical and consequent psychosocial morbidity.

Pruritus

Pruritus remains an under-recognised symptom in psoriasis, yet its prevalence and effect are substantial. Studies report that between 67% and 77% of patients with psoriasis have symptoms of pruritus which are significant and arise on a daily basis, and 92% have had pruritus at some point. Interestingly the magnitude of pruritus does not appear to always correlate to clinical severity. It is exacerbated by heat, skin dryness, sweating and importantly, stress. There is a known association between pruritus in psoriasis and the risk of depression, again leading to a negative cycle of worsening psoriasis and mental health. In a survey of 104 patients with psoriasis, 30% of patients reported pruritus to be the worst physical factor, a symptom that is often under-estimated in this condition.

Table 9.2 Physical symptoms of psoriasis

Skin symptoms: • Itching • Skin shedding • Tightness • Redness • Dryness • Bleeding • Pain
Functional impairment: • Self-care • Activities of daily living • Occupational factors
Sexual dysfunction
Sleep disturbance

Functional Impairment

Functional impairment in psoriasis is common, and particularly seen when it affects the palms and soles; the consequent physical disability from pain results in higher levels of functional impairment. This in addition to nail involvement has been shown to limit the ability to self-care and perform basic activities of daily living. These restrictions result in psychological distress and isolation.

These physical factors can have significant sequelae, ranging from the inability to carry out simple activities of daily living, through to occupational difficulties which can be so severe as to render patients unable to work. These effects can exacerbate the condition and can lead to social isolation and a downward spiral of psychological distress and worsening of the skin.

Sexual Dysfunction

Sexual dysfunction in psoriasis is common, and psoriasis is reported to interfere with sexual relations in 35–50% patients. This appears to be more prevalent in female patients and can manifest in a number of ways. The physical involvement of the genital skin can make sexual intercourse painful or uncomfortable. A large study of 354 patients revealed that 39% patients experienced pain, 42% dyspareunia and 32% worsening of genital psoriasis after intercourse. The psychological effect of the skin being affected, not only the genital skin but generalised psoriasis, can make it difficult for patients to enter relationships, due to self-consciousness or fear of stigma. This is another way in which social isolation can ensue resulting in mental health decline. In addition, psoriasis causes a decrease in libido in a large proportion of patients. Those who report sexual dysfunction as a result of psoriasis have more symptoms of depression. It appears that psoriasis has a profoundly negative impact on sexual health and satisfaction.

Sleep Disturbance

Sleep disturbance is common and variable in psoriasis, with reports ranging from 5.9% to 44.8% prevalence. The reasons for insomnia include innate disturbance in thermoregulation due to psoriasis, physical symptoms of the condition which themselves cause poor sleep, the negative psychiatric sequelae in which sleep is often disturbed, and finally the higher prevalence of comorbid conditions.

The skin has an important role in mediating core body temperature and acts as a primary circadian mediator to reduce this temperature at night as part of normal sleep initiation. The normal and physiological reduction in core body temperature occurs due to a drop in metabolic heat generation, increase in blood flow to the skin and distal vascular dilatation; these result in the dissipation of heat and increase in transepidermal water loss. In psoriasis, thermoregulation via the skin is impaired, and therefore sleep initiation may be compromised as a result.

Cutaneous symptoms including pruritus and pain are well recognised in psoriasis (see section “Physical Factors”), and pruritus is often said to be worse towards the

end of the day. This symptom is also regulated by circadian mechanisms and the threshold for symptoms is lower in the evening due in part to a reduction in cortisol levels, increase in temperature and reduced epidermal barrier function. This therefore manifests as an exacerbation of cutaneous symptoms at night which cause disturbed sleep.

Many of the associated comorbid conditions can also result in sleep disturbance; for example, there is a higher prevalence of obstructive sleep apnoea in psoriasis, with studies reporting 36%–81.8% in psoriasis, compared with 2%–4% in the general population. There is also a known increased prevalence of restless leg syndrome (15%–18% in psoriasis patients compared with 5%–10% in the unaffected population). The increased prevalence of psychiatric comorbidity (see section "Psychiatric Comorbidities") is also a significant contributor to problems with sleep.

Psychosocial Factors

The psychosocial aspect of psoriasis has been reported by patients to be one of the worse aspects of their condition, resulting in a severely negative impact on the quality of life (see the section on *Psychiatric Comorbidities)*. The extent to which this occurs differs widely, and does not always correlate with the extent of disease. The psychosocial implications are varied and include negative emotional effects on the self, as well as impacting their interactions with their close and wider social network.

Psychological Factors and Schemas (Table 9.3)

The profound psychological impact of psoriasis is well recognised, and the role of distress in the onset, exacerbation and persistence of the condition is also well established. The common and recurrent patient reported themes in studies include negative effects on self-confidence, feelings of shame, embarrassment and a lack of self-esteem. In a large study of 217 patients, over 50% reported feeling self-conscious around strangers. Research has shown that patients with psoriasis use anticipatory and avoidance behaviours as a coping mechanism.

Schemas are now being recognised as an important part of this psychological sequelae. These are engrained cognitive and emotional patterns which influence the

Table 9.3 Schema in psoriasis

Early maladaptive schemas in psoriasis (Mizara et al. 2012)
Emotional deprivation
Social isolation
Defectiveness
Failure
Vulnerability to harm
Subjugation
Emotional inhibition

individual's approach to life; the early maladaptive schemas (EMS) are those which originate in childhood and develop in adulthood. Schemas are particularly difficult to challenge as they are deeply held beliefs that are consolidated through repeated and often self-fulfilling experiences. A number of these schemas have been described in psoriasis (Table 9.3). EMS are strongly predictive of psychological distress. In particular *vulnerability to harm* and *defectiveness* is predictive of anxiety and *social isolation* and *vulnerability to harm* are predictive of depression.

Interestingly, patient's beliefs about the negative effects of living with psoriasis affect their ability to cope with their condition. This is further complicated by evidence that patient symptoms are more severe when they believe their skin is unsightly, have worries about being excluded, or have feelings of low self-worth.

Social Factors (Table 9.4)

Psoriasis affects many patient's ability to function to their best potential in social environments. This is largely a consequence of the psychological effects of this condition. The fear of stigma plays a large part in this (see below). This results in withdrawal from relationships with family and friends, intimate relationships, interactions with the general public, and can have detrimental effects on study and work. Numerous studies have shown that patients with psoriasis try to hide their psoriasis, and many report avoiding social activities that involve showing their skin such as swimming, with one study quoting that 83% of patients would 'often' or 'always' avoid these situations. Social functioning appears to be more severely affected in psoriasis than in other chronic conditions such as hypertension and arthritis, reflecting the visible nature and stigma associated with this condition.

The ability to work and study can also be severely impacted by psoriasis; of a large survey of 369 patients with psoriasis in the UK, one third attributed not working to their psoriasis, and two studies have shown a lower rate of employment in those with severe psoriasis. In patients with severe psoriasis, up to 26 days working days per year were lost as a result of their disease. Over 17% of 18–54-year-old patients with psoriasis report a psychological impact of psoriasis on their work, and 23% reported that their psoriasis had an impact on the choice of their career. In those who do work, over half report that the quality of their work life is negatively impacted as a result of their psoriasis (Table 9.4).

Table 9.4 Psychosocial impact of psoriasis on quality of life

Negative psychological effects on the patient: • Self-image • Self-esteem • Self-wellbeing • Early maladaptive schemas
Negative effects on social functioning: • Relationships with friends and family • Sexual relations • Day to day encounters with the general public • Occupational effects

Table 9.5 QOL questionnaires

Quality of life indices	Specificity	Areas analysed	Comments
Salford Psoriasis Index (SPI)	Disease-specific	• Clinical extent of psoriasis (PASI score) • Psychosocial disability • Past severity (based on treatment history)	• Physician reported
Dermatology Life Quality Index (DLQI)	Dermatology-specific	• General quality of life in relation to the skin	• Patient reported • Most commonly utilised as a treatment target
Hospital Anxiety and Depression Scale (HADS)	General	• Anxiety and depression	• Patient reported • Provides separate scores for anxiety and depression

Quality of Life Questionnaires (Table 9.5)

Objective measures of quality of life (QOL) are important when assessing psoriasis patients, as the high prevalence of alexithymia (see section "Alexithymia") may render it difficult for clinicians to ascertain the extent of the psychological impact of the disease. As results are not infrequently higher than expected, and not always proportional to the severity of their skin disease, measuring the extent of skin disease is not an accurate surrogate for assessing the quality of life.

High scores on quality of life assessments should prompt the assessing clinician to consider whether the patient may benefit from psychological intervention. Importantly for patients on systemic and biologic therapy, QOL represents important end-points in assessing treatment response and the results of direct therapy.

Quality of life questionnaires in dermatology are generally categorised as general health and dermatology-specific and disease-specific questionnaires. General health questionnaires aim to assess the overall physical and psychosocial factors. Skin-specific questionnaires can be more helpful, and efforts have been made to devise psoriasis-specific questionnaires to generate more relevant and meaningful information; these can be used in conjunction with general health questionnaires to provide a better understanding of the disease impact. Examples of some of the most commonly used questionnaires in psoriasis are listed above (Table 9.5).

Stigma (Table 9.6)

Stigma is defined as '*a mark of disgrace which sets people apart from each other*'.

Many patients with psoriasis report experiencing stigma as a result of their skin, which can have a profound effect on their social interactions and general quality of life. This effect is most pronounced in the 18–45 year old age bracket, correlating with the age in which people are most likely to be socially and professionally active.

Table 9.6 Components of stigmatisation (Ginsburg and Link 1989)

Anticipation of rejection
Feelings of being flawed
Sensitivity to others' attitudes
Guilt and shame
Secretiveness
Positive attitudes

The visible nature of their condition renders patients exposed and vulnerable to external perception and misconceptions. Many patients report experiences of being publicly rejected due to a public belief that the condition is contagious, or simply due to fear or lack of knowledge. The result of this on the patient, are feelings of shame and lack of self-worth, with consequent avoidance, isolation and social withdrawal. In a large study of patients with moderate to severe psoriasis, one quarter reported an episode where someone 'had made a conscious effort not to touch them'. Those with publicly visible affected skin perceive their condition to be more disabling and have higher levels of self-reported physical morbidity.

Ginsburg et al. identified six dimensions to stigmatisation (Table 9.6). There appears to be a significant variation in the frequency with which these feelings are experienced, and contradictory feelings could be experienced simultaneously. The group also investigated predictors for the components of stigma experienced. They found that age of onset, bleeding, employment, duration of experience and rejection were the strongest predictors of stigma. Of these, bleeding was the most strongly predicting factor and correlated highly with stigma. Stigma was also associated with poor adherence to treatment and worsening of psoriasis.

Alexithymia

Alexithymia is the difficulty in identifying, expressing and describing one's feelings.

An observational study measuring alexithymia using the validated Toronto Alexithymia Scale in a large cohort of psoriasis patients showed a 24.8% prevalence in this group (compared to approximately 5–10% in the general population). These patients had more severe disease, significantly reduced quality of life, greater prevalence of anxiety and depression, a higher rate of alcohol dependence, and reduced work productivity. Alexithymia can make it difficult for clinicians to ascertain the true effect of the patient's psoriasis on their life.

Practice Point

There are many external factors that can both cause and result in the worsening of psoriasis; these result in a profound effect on the quality of life. Patient's perceptions of their condition or symptoms do not always correlate with the objective skin severity, and therefore clinicians need to be proactive in enquiring about the psychosocial effects and quality of life.

Treatment

As has been demonstrated, psoriasis is a complex condition with a significant psychological overlay (Fig. 9.3). Therefore, just simply treating the skin is not always sufficient; often a more holistic approach, including a focus on psychological health, is required in order to successfully manage these patients (Table 9.7).

Due to the chronic and relapsing nature of the condition, and the fact that many patients have been undertreated for years, it can be difficult for clinicians to encourage patient adherence and positivity to treatment.

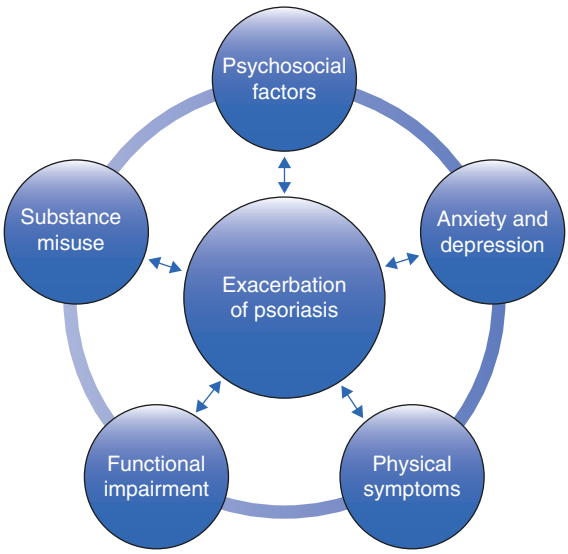

Fig. 9.3 Factors leading to exacerbation of psoriasis

Table 9.7 Treatment options

Treatment	Pros	Cons
Skin directed therapy	• Essential component of treatment approach • Clinical improvement may improve psychosocial function	• Adherence can be variable when there are complex coexistent psychosocial issues • Clinicians may focus on this and neglect holistic approach
Cognitive behavioural therapy	• Can be helpful in combination with standard treatment • Particularly useful to interrupt learnt negative behaviours	• Requires patient and time commitment • Not always accessible
Psychotropic therapy	• Can be a useful adjunct to standard therapy	• Can cause a paradoxical flare of psoriasis

Treatment of the Skin

Treatment of the skin is generally instigated in a stepwise approach and should be tailored to the individual patient depending on the extent of disease, severity and effect on the quality of life. This involves topical treatments, phototherapy, systemic and biologic agents. Further details are outside the scope of this book. There is plenty of evidence from every day clinical practice that when the skin is treated, patients are generally more satisfied and have an improved quality of life. However as mentioned previously, this is not always a predictable response and sometimes quality of life measures reveal that the patient may still be suffering from significant psychological morbidity despite an improvement in their physical health.

Cognitive Behavioural Therapy (CBT)

CBT is a psychological intervention that involves identifying and challenging unhelpful thoughts and behaviours, and learning competing coping mechanisms in order to break the negative cycle. It is well established that stress and distress are frequent exacerbators of psoriasis, but this recognition can also cause patient anxiety which can perpetuate a worsening of their physiological and psychological state. CBT aims to break this cycle. There is evidence that just 6 weeks of weekly CBT sessions combined with standard treatment, versus standard treatment alone, have a significant improvement in the clinical severity of the skin, and improves symptoms of anxiety, depression, stress and disability. In one study, these results persisted at the 6-month follow-up, with 64% of patients achieving a greater than 75% improvement in the clinical extent of their psoriasis, compared with 23% in the control group. Other evidence suggests that CBT is effective at improving anxiety levels but less effective at treating depression. Another study has shown that just seven psychotherapy sessions delivered over 12-weeks resulted in clinical improvement although the perception of stress remained similar. Promising results have also been demonstrated using an internet-based electronic CBT intervention, with an improvement in anxiety and quality of life.

Psychotropic Medication

Psychotropic medication includes any medication which affects the mind, emotions or behaviour. There is a scarcity of high-level evidence for the use of psychotropic medication in psoriasis; however, identifying and treating comorbid psychiatric diagnoses is anecdotally known to be beneficial. In one double-blind placebo-controlled study of 60 patients with psoriasis, patients were randomised to a Moclobemide (a monoamine oxidase inhibitor antidepressant) plus topical corticosteroids, or to topical corticosteroids alone. Those treated with the antidepressant and topical corticosteroids showed improvements in the clinical severity of psoriasis as well as well as depression and anxiety. Another small observational study of

38 psoriasis patients treated with anti-TNFα treatment compared concurrent treatment with Escitalopram (a selective serotonin reuptake inhibitor antidepressant) and psychotherapeutic treatment, compared with psychotherapeutic treatment alone; those treated with Escitalopram plus psychotherapeutic treatment had greater improvements in the clinical severity of their skin, as well as greater reduction in symptoms of anxiety and depression.

Clinicians should however be aware that there are reports of psychotropic medication resulting in flaring or inducing psoriasis, and these include but are not limited to lithium (a well-recognised culprit), fluoxetine (several case reports), and bupropion.

Practice Point

Effective treatment of psoriasis requires a holistic approach to the physical and psychosocial aspects, in order to maximise patient adherence and chance of efficacy.

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