**Cover Letter**

**Manuscript title:** Self-induced skin conditions: differential diagnosis and management

**Manuscript type:** Clinical Intelligence

**Authors**: Goulding JMR, Mughal F

**Corresponding author**: Dr Jon Goulding, Consultant Dermatologist, Dermatology Department, Solihull Hospital, University Hospitals Birmingham NHS Foundation Trust, Birmingham, United Kingdom. jon.goulding@heartofengland.nhs.uk

**Remaining author:** Dr Faraz Mughal, General Practitioner and NIHR In-Practice Fellow, Research Institute for Primary Care and Health Sciences, Keele University, Staffordshire, UK.

**References**: 5

**Word count**: 1022

**Tables**: 2

**Figures**: 1

**Conflicts of interest**: Nil

**Declarations:** FM is supported by a NIHR In-Practice Fellowship. The views expressed in this paper are those of the authors and not necessarily those of the NHS, the NIHR, or the Department of Health and Social Care.

FM is the RCGP Clinical Fellow in Mental Health, Clinical Innovation and Research Centre.

**Acknowledgements:** We would like to acknowledge Dr Sarah Davies for her input into an initial draft of this manuscript and the Primary Care Dermatology Society for granting us permission to use an image.

**Introduction:**

There exists a wide spectrum of self-induced skin disease which may present to primary care clinicians. At one end are commonly recognised entities such as lichen simplex chronicus, nodular prurigo, and chronic atopic eczema perpetuated by habitual scratching. At the other end are a range of complex, multifactorial psychodermatological conditions which are challenging to diagnose and manage.

In this article we focus on skin picking disorder, trichotillomania, and dermatitis artefacta, to assist primary care clinicians in managing these conditions effectively.

***Skin picking disorder (SPD)***

SPD is characterised by repeated picking of the skin, resulting in recalcitrant skin lesions. To satisfy the criteria for a diagnosis of SPD, there must have been persistent attempts by the patient to reduce or discontinue picking, with clinically significant distress or impairment of functioning.1 Females tend to be affected more often, with onset typically in adolescence.

Patients may spend several hours at a time picking or gouging at the skin, often in a ritualised fashion, sometimes using various implements. Picking episodes are commonly triggered by increased stress, and comorbid mental health disorders are often associated. All patients with SPD will acknowledge their tendency to pick, to a greater or lesser extent, if questioned sensitively.2

Self-induced skin lesions in SPD are usually obvious on examination. Discrete, monomorphic, eroded or ulcerated papules, nodules and plaques tend to be distributed symmetrically over easily accessible sites. Lesions at all stages of the healing process may be present, including scarring and post-inflammatory hypo- and hyper-pigmentation.

***Trichotillomania***

Trichotillomania, or hair pulling disorder (HPD), is a condition in which patients recurrently pull their own hair, resulting in noticeable hair loss. Similar to SPD, patients typically report feelings of increased tension beforehand, with relief or gratification noted during or immediately afterwards.3 HPD is also classified as an obsessive-compulsive related disorder, and for the diagnosis to be made the patient must have attempted to stop hair pulling, and there must be a significant impact on psychosocial functioning.1

In childhood HPD is usually benign and self-limiting, often presenting as a habit disorder. It can be associated with a mood disorder or learning disability. In adolescence or adulthood, HPD may be more closely linked with a mental illness, or significant psychosocial stressors. As with SPD, always consider the possibility of abuse (*think safeguarding*), and assess for self-harm and suicide risk.

Scalp hair is most commonly affected in HPD, although other sites may be involved including eyebrows, eyelashes, and pubic hair. Examination reveals discrete patches of decreased hair density, which may progress to diffuse global thinning. Hairs of varying lengths and broken shafts can often be observed on close inspection. In our experience, patients may be less willing to acknowledge their hair pulling behaviour compared to those who pick their skin.

***Dermatitis artefacta (DA)***

DA is a form of factitious disorder in which patients generate their own skin disease while hiding their actions from clinicians.4 It is invariably associated with a comorbid psychological or mental health disorder, and may be considered ‘a cry for help’. At its heart, the job of the clinician is to tease out, cautiously and sensitively, what is going on in the patient’s life to drive such an extreme response. Abuse, chronic illness, stress at home or at work, heavy caring commitments or bereavement may underlie individual presentations.5 There is again a female predominance.

In marked contradistinction to SPD, patients with DA are very resistant to any suggestion that their skin lesions may be self-induced. The history is often ‘hollow’ with a vague story or poor recollection of details. Patients may appear unphased about the severity of their skin eruption, while relatives are often angry and incredulous that an explanation is not forthcoming.

Examination reveals bizarre, often linear, discoid or angulated lesions in accessible sites on the non-dominant side (Figure 1). There can be a wide variety of morphologies which may give a clue as to how individual lesions have been generated. Crucially, there is nothing to be gained, and everything to lose, if the patient is confronted directly about their likely actions. Of far greater importance is the ability to establish rapport and demonstrate empathy.

**Figure 1:** Dermatitis artefacta on the forearm caused by superficial burns



Copied with kind permission of the Primary Care Dermatology Society

**Primary care differential diagnoses:**

When confronted with the possibility of any of the above conditions, there is a need to actively consider, and if necessary exclude, a range of potential internal disorders. Table 1 shows some systemic causes of pruritus which could manifest as suspected SPD or DA.

**Table 1:** Systemic causes of pruritus

|  |  |
| --- | --- |
| Iron deficiency anaemia | HIV infection |
| Uraemia | Lymphoma |
| Cholestasis | Polycythaemia rubra vera |
| Coeliac disease | Thyroid dysfunction |
| Occult malignancy | Drug eruption |

The possibility of a primary organic skin or hair disease should also be reviewed. Table 2 suggests a range of condition-specific dermatological differential diagnoses.

**Table 2:** Condition-specific differential diagnoses

|  |  |
| --- | --- |
| **Specific condition:** | **Differential diagnoses:** |
| Skin picking disorder | AcneScabiesPapular eczema |
| Hair pulling disorder | Diffuse alopecia areataLichen planopilarisSyphilis |
| Dermatitis artefacta | Pyoderma gangrenosumBullous pemphigoidSkin cancer |

A balance needs to be struck between embarking on judicious, limited investigations and onward referral if indicated, while not delaying meaningful assessment and management of underlying distress.

Beyond the physical differential diagnoses, related but distinct psychodermatological conditions need to be considered. Body dysmorphic disorder may be a more likely diagnosis if there are significant appearance-related concerns, particularly if skin lesions are minimal or absent. Delusional infestation may present with cutaneous signs similar to SPD, HPD or DA, but the patient’s fixed belief regarding insect or other infestation makes this diagnosis more likely.

**Management:**

The most important factor in achieving a successful resolution in such cases is to set aside sufficient time. Offering the patient booked follow-up and ensuring continuity of care will assist enormously in ongoing management.6 Time should initially be invested to listen to the patient’s story, defuse anger, build rapport, and demonstrate empathy. Fostering a calm, supportive, non-judgemental atmosphere may help the patient move from a narrow physical interpretation of events towards an acknowledgement of the wider psychosocial context.

It is a cornerstone of psychodermatology to treat both the skin and the mind simultaneously. Most patients will benefit from using a soap substitute and regular emollient, with additional topical or systemic therapy as indicated, such as to treat secondary infection.

Recognition and appropriate management of comorbid mental illness and underlying psychosocial stressors is of key importance. There should be a low threshold for referral to mental health services, to optimise medication, and initiate talking therapy if appropriate. Where available, referral to an integrated multidisciplinary psychodermatology service may offer the best chance of success.5

**References:**

1. American Psychiatric Association. Diagnostic and Statistical Manual of MentalDisorders, 5th edn. Washington DC, 2013.
2. Johnson G, Johnson O, Martin K, Goulding J. Skin picking disorder: unpicking a topical issue. Dermatology in practice 2016; 22(4): 95-98.
3. Abramowitz JS, Jacoby RJ. Pickers, pokers, and pullers: obsessive-compulsive and related disorders in dermatology. In: Practical Psychodermatology. Bewley A, Taylor RE, Reichenberg JS, Magid M, eds. 1st edn. Chichester: John Wiley & Sons Ltd, 2014: 135.
4. Millard J, Millard L. Factitious skin disorder (dermatitis artefacta). In: Practical Psychodermatology. Bewley A, Taylor RE, Reichenberg JS, Magid M, eds. 1st edn. Chichester: John Wiley & Sons Ltd, 2014: 142.
5. Mohandas P, Bewley A, Taylor R. Dermatitis artefacta and artefactual skin disease: the need for a psychodermatology multidisciplinary team to treat a difficult condition. Br J Dermatol 2013; 169(3): 600-606.
6. Mughal F, Goulding J, Martin K. Psychodermatology: where skin meets mind. Royal College of General Practitioners, Mental Health Toolkit, 2018 [http://www.rcgp.org.uk/clinical-and-research/resources/toolkits/mental-health-toolkit.aspx].