CASE REPORT

A CASE REPORT ON EXCORIATION DISORDER AND TYPE 1 HYPERSENSITIVITY; A DISTRICT HEALTH FACILITY-BASED STUDY

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Abstract

Excoriation disorder (ED) or psychogenic excoriation is a "repetitive and compulsive picking of skin which results in tissue damage" characterized by an obsessive-compulsive spectrum mental disorder with a repeated urge or impulse to pick at one's own skin to the extent of causing psychological or physical damage.[1, 2] Prevalence of this condition is unavailable in developing countries of the world. It is classified as "L98.1 Excoriation (skin-picking) Disorder" in ICD-10 and referred in some literature as *"dermatillomania"*. ED is characterized by, but not invariably, the compulsive urge to pick, squeeze or scratch skin surfaces experienced by patients. Commonly picked parts of the body include the face (most picked), arms, legs, back, gums, neck, shoulders, scalp, abdomen, chest, the knuckles (via mouth leading to temporary disfiguration of distal and proximal joints of the middle and little fingers) and other extremities e.g. the fingernails, cuticles, and toe nails;[5] skin picking may be accompanied by anxiety with depression following picking.[5] It is often triggered by factors that include feeling or examining irregularities on the skin, feeling anxious etc. Complications include infections, tissue damage and sepsis. Rarely, severe cases cause life-threatening injuries. Risk of self-harm is increased by feelings of intense helplessness, guilt, shame and embarrassment.[8] Studies further describe significant associations between ED and suicidal ideation, suicidal attempts and psychiatric hospitalizations.

Key Words: Excoriation, hypersensitivity, disorder

Introduction

Excoriation disorder (ED) or psychogenic excoriation, defined as "repetitive and compulsive picking of skin which results in tissue damage",[1] is an obsessive-compulsive spectrum mental disorder characterized by the repeated urge or impulse to pick at one's own skin to the extent of causing psychological or physical damage.[2] It was formerly classified as an "Impulse Control Disorder" (f63)" and currently classified as "ICD-10 L98.1 Excoriation (skin-picking) Disorder" in ICD-10 (or factitial dermatitis/neurotic excoriation or *Dermatitis factitia*).[3]

Excoriation disorder also referred to as *"dermatillomania" for some time* is currently classified as a separate condition under "Obsessive Compulsive and Related Disorders" and is termed "excoriation (skin-picking) disorder" as of the release of the fifth Diagnostic and Statistical Manual of Mental Disorders in May 2013.[3] ED, until recently, did not have a specific listing in the ICD coding guidelines and was sometimes coded under factitial dermatitis (Neurotic excoriation) – (Code: 98.1).[4] It is however currently added, as a new category, under OCD (Code: 42.4) since the latest DSM-5 current as of 1st October 2017 by the World Health Organisation (WHO).[4] The ICD-11, published 2018, categorises ED under Body-focused repetitive behaviour disorders which sits under Obsessive-compulsive or related disorders.[4]

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Similarities between ED and *trichotillomania* (the uninhibited urge to pull on one's own hair) are established in extant evidence base by researchers; they both have ritualistic symptoms without any preceding obsessions, similar triggers for the compulsive actions, similar age of onset, high level of co-morbidity between them and appear to importantly modify arousal levels of patients.[4] Skin picking, characteristic of ED, is dominated by females and this comprises a notable difference with trichotillomania which is more evenly distributed across genders.[5] ED is a type of Obsessive Compulsive Disorder (OCD) on the basis of "repetitive engagement in behaviors with diminished control" which reduces prior anxiety.[1] ED and OCD however further fundamentally differ as follows: as explained above, ED is largely experienced by females and may be inherently pleasurable while OCD, on the contrary, is not.[1] Treatments that are generally effective for patients with OCD (i.e. Selective Serotonin Reuptake Inhibitors - SSIRs and Exposure Therapy) are not as successful in patients with excoriation disorder.[1] Picking of skin in ED is very rarely driven by obsessive thoughts unlike OCD.[1] Odlaug and Grant have however documented

similarities that include compulsion to engage in the negative behavior despite knowledge of the harm, lack of control over the problematic behavior, strong urge to engage in the behavior prior to engagement, feeling of pleasure while engaging in the behavior and a feeling of relief or reduced anxiety after engaging in the behavior.1

ED is characterized by, but not invariably, compulsive picking of the knuckles (via mouth) leading to temporary disfiguration of distal and proximal joints of the middle and little fingers, *dermatophagia*, often preceded or accompanied by anxiety.[6] Feelings of depression may however follow picking.[5] Episodes are commonly characterized by a compulsive urge to pick, squeeze, or scratch at a surface or region of the body, often at the location of a perceived skin defect and this may result in a sense of relief or satisfaction.[6] Regions of the body typically picked are face (most picked),[1,6] arms, legs, back, gums, neck, shoulders, scalp, abdomen, chest, and extremities e.g. fingernails, cuticles, and toenails.[3] This case report aims to describe ED in a female patient attended to at the Kade government hospital (in the Eastern Region, Ghana) triggered by skin eruptions that the patient experiences typically around the period of her menses. The study was carried out with full signed consent of the patient (i.e. without coercion) after she was educated on what comprises a case report and how the case report would be devoid of identifying variables that could render the patient traceable.

Case Report

A 38 year old female married with 2 children, a general nurse by profession, reported with several episodes of acute attacks of bronchial asthma to a district hospital. She reported experiencing recurrent acute attacks of bronchial asthma since late childhood and through adolescence. Acute attacks were largely amenable to the use of salbutamol inhalers though they sometimes warranted in-patient management at the hospital with nebulized salbutamol, parenteral steroid administration and administration of antibiotics as and/or whenever deemed appropriate for the empirical management of a suspected underlying trigger. *The patient recounted growing up under authoritarian parents*. Her family history indicates that her father had bronchial asthma on account of which he experienced several severe acute attacks while her mother was on routine treatment for essential (idiopathic) hypertension. She has four elder male siblings among whom the second also had recurrent episodes of acute attacks of bronchial asthma as a child.

Her other siblings however occasionally experience itching and generalized pruritic sensations with intermittent development of skin eruptions and rhinitis.

The patient further explains experiencing occasionally severe attacks of bronchial asthma as a child which increases in frequency whenever she experienced what she termed '*traumatic experiences'* of repeated quarrelling between her parents leading to eventual breakdown of their marriage. Between acute attacks, she typically experiences recurrent episodes of excessive and prolonged sneezing that worsens in the dry seasons, itching of the eyes (which, at various health establishments at the time, was severally managed as an eye disease independent of the allergic condition), itchy skin surfaces, urticarial rashes on various parts of her body and other recurrent skin eruptions. In response to an alert physician's observation of several healed scars on various parts of her body, some more prominent than others, she reports an uninhibited urge/compulsion and tendency to pass her hands all over her skin surfaces trying to feel for any palpable *'skin bumps'* or simply to scratch an itching part of the body.

She acknowledges the uncontrolled urge to *'flatten'* any palpable skin lesion which sometimes results in the formation of secondary excoriations and ulcerations on the skin at locations where a skin eruption has been deliberately scratched. She however further reports skin picking is not observed to be selective in nature i.e. the picking tendency does not have any predilection for e.g. only hidden parts of the body more than those that are typically open (e.g. hands, lower third of lower limbs etc.). The patient further indicates a fairly *'controlled'* urge/compulsion to even scratch or squeeze visible skin eruptions on the faces or hands of her husband, children and other people she encounters. Whenever asked by her husband how a particular skin ulcer (healed or still fresh) was sustained, she experiences a sense of 'guilt' which serves as sufficient motivation to stop skin picking, temporarily; sustaining the stoppage has however remained difficult and typically only lasts for a few days or sometimes, few hours. The urge to scratch parts of the body worsens when she is ovulating and experiencing premenstrual syndrome during which period, she also experiences an increased frequency of wheezing, urticarial skin lesions, itching of the skin and eyes and general bodily discomfort; this typically happens about 3 – 5 days before her menses. The compulsion to pick, however still persists outside this period. See figs. 1 – 5 below showing healed skin ulcers i.e. scars on various body parts of the patient caused by repetitive skin picking.

Fig. 1: Scars on Thighs from Picking

Fig. 2: Scars on Lower Limb from Picking

Fig. 3: Scar formation on Hand from Picking

Fig. 4: Scars on Left Leg from Picking

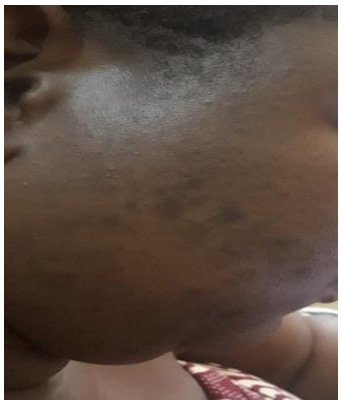

Fig. 5: Facial Scars from Picking

Discussion

Patients with ED largely report a part of the body with predilection for picking though they still pick other areas to allow the primary picking areas to heal.[1] The patient in this case report however on the contrary, indicated she sometimes continues to pick even already picked parts that may have ulcerated; this should be further investigated in future studies. While some individuals with ED may pick briefly multiple times a day, others may have picking sessions lasting for hours.[1] Though the use of fingers/fingernails for picking remain the most common, a significant minority may use tools such as tweezers or needles.[4] *Skin picking on account of ED is invariably facilitated by triggering causes, common among which are feeling or examining irregularities on the skin and feeling anxious or other negative feelings*.[6] ED complications, aside physical scarring and disfigurement, may include infection at the site of picking, physical damage to tissues and septicemia though rare.[6] Cases of severe damage following picking may necessitate skin grafting; life threatening injuries however remain rarely documented in available studies.[1] Patients of ED may experience feelings of intense helplessness, guilt, shame and embarrassment following skin picking.[1]

Many different theories have sought to explain causes of ED including *biological* and *environmental* factors.[1] Research has hypothesized that ED comprises a coping mechanism to help manage elevated levels of turmoil, arousal or stress within individuals who have impaired stress responses.[1, 7] Some psychologists, contrary to the neurological theories, explain that the picking behavior may be attributable to repressed rage felt toward authoritarian parents; a similar theory also further holds that overbearing parents may cause development of the behavior in their children.[1] Available evidence in support of this theory further indicate that strong associations exist between ED and traumatic childhood events.[1]

Evidence in support of *neurobiological* causative factors of ED remain scanty as there are no known neuroimaging studies of ED patients. Research has established linkages between cocaine and methamphetamine drug abuse (which increase the pharmacological effects of dopamine) and triggers an uncontrollable picking urge in users.[1] Evidence in support of inherited traits or genes is currently unavailable.[8] Diagnosis of ED is typically challenged by objection to its inclusion in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5); creation of a separate category in the DSM-5 is firstly premised on the position that *ED may just be a symptom of different underlying disorders* and secondly because *ED is simply a bad habit that should not be accorded its own separate category* to avoid inclusion of a wide array of bad habits as separate syndromes e.g. nail biting and nose-picking.[5] Stein however posits that ED qualifies as a separate syndrome that deserves its own category with the reasons that ED occurs as the primary disorder and not as a subset of a larger disorder that has well-defined clinical features and diagnostic criteria and has a high incidence in the population.[4] It is therefore not described in this case report as a subset of the clinical spectrum of hypersensitivity but hypersensitivity is described in the capacity of a sufficient and maybe, persistent trigger for picking.

Neurotic ED (NED) refers to skin picking whereby the patient confesses to the creation of the lesions; researchers in the field of psychiatry however employ rather rigid diagnostic criteria for NED. Patients within the psychiatric criteria are at a severe end of the clinical spectrum.[9] Despite its classification as a psychiatric disorder, psychiatric and dermatologic factors may combine to trigger NED.[9] *Patients with undertreated pruritic dermatoses or with insect bites, dry scaly skin, acne, keratosis pilaris and other cutaneous irregularities are at risk of picking when stressed*.[9] Current evidence base is deemed largely biased as subjects in these studies were mainly recruited from psychiatric homes or psychology students; this further biases understanding of the clinical spectrum.[9] *While the average age of onset is 15 – 35 years, female to male ratio of 70:25 characterizes ED and 44% of patients report an increased perimenstrual urge to pick*.[9] Patients generally seek medical help after about 10 years due to feelings of guilt and shame.[9]

The American psychiatric association includes ED in the Obsessive Compulsive Syndrome spectrum of diseases.[9] *NE can be triggered by some minor skin pathologies e.g. insect bite, eczema, folliculitis or acne*.[9] This case report posits that the underlying trigger for picking for the patient mainly comprises the underlying type 1 hypersensitivity disorder (in accordance with the Coombs and Gell classification i.e. undesirable reactions produced by the normal immune system, e.g. allergies and autoimmunity).[11] Type one hypersensitivity reaction is characterized by immediate response to an allergen occurring in minutes, rather than multiple hours or days when free antigens cross-link the IgE on mast cells and basophils causing release of vasoactive biomolecules.[12] Such reactions notably include atopy, anaphylaxis, asthma and Churg-Strauss Syndrome.[11] *The patient reports an observed increase in skin picking around and during her menstrual periods i.e. increased urge to pick during menstruation and the perimenopausal period; this is consistent with research findings that indicate that about 44% of patients, largely female, generally report an increased perimenstrual urge to pick*.[9]

The increased urge to pick shortly before menses may be possibly triggered and explained by *Autoimmune Progesterone Dermatitis* (APD); this is a rare immune response to endogenous progesterone first described in 1921, characterized by cyclic cutaneous and mucosal lesions at the end of the luteal phase when progesterone levels are elevated. The lesions typically disappear 1 - 2 days after menstruation ceases.[13] Intradermal testing with 50 mg/mL progesterone was

however beyond the clinical capacity and expertise of the district hospital where this study was carried out. *Lesions characteristic of Autoimmune Progesterone Dermatitis (APD) may include erythema multiforme, urticaria, eczematous patches, angioedema, papulopustular/papulovesicular lesions, stomatitis, folliculitis, Stevens Johnson syndrome, vesiculobullous reactions, dermatitis herpetiformis-like rash, and mucosal lesions*.[12] Lesions may be localized or generalized and have a predilection for the face.[12]

Other health conditions that characterize type I hypersensitivity may be exacerbated just before and during a woman's menstrual period when progesterone and estrogen levels decrease.[14] This complex relationship between hormones and type I hypersensitivity reactions (reported in an estimated 19 and 40 % of asthmatic women)[15] may worsen bronchial asthma for some women; it is a phenomenon not yet fully understood.[14] A hypothesis posits that fluctuations in hormonal status at ovulation and before periods influences asthma in women with special focus on estrogens.[15] The perimenstrual sex hormone fluctuations are also considered responsible for many other perimenstrual symptoms and for specific inflammatory, autoimmune and pain related conditions e.g. headache and pelvic pain etc.[15] Symptoms of atopic dermatitis, urticaria etc. therefore significantly increase around the perimenstrual period during which period skin picking may therefore be intensified.[15]

A hypothesis portrays ED as a coping mechanism to deal with elevated levels of turmoil, arousal or stress within the individuals who inherently have an impaired stress response while some psychologists attribute the behavior to repressed rage felt toward authoritarian or overbearing parents.[1] Ten patients, interviewed by researchers with aims to establish diagnostic criteria for ED, largely reported experiencing personal problems when picking began while four reported abuse suffered in childhood or adolescence.[16] The patient in this case report identifies childhood experiences with marital problems of her parents and the experience of authoritarian parenting as traumatic exposures during her childhood. The fifth Diagnostic and Statistical Manual of Mental Disorders (DSMMD), May 2013, classifies this disorder as its own separate condition under "Obsessive Compulsive and Related Disorders" and is termed "excoriation (skin-picking) disorder"; it is however currently added, as a new category, under OCD (Code: 42.4) since the latest DSM-5 current as of 1st October 2017 by the World Health Organisation (WHO).[4] The ICD-11, published 2018, categorises ED under Body-focused repetitive behaviour disorders which sits under Obsessive-compulsive or related disorders.[4]

Case Management and Prognosis

Exposure and Response Therapy (ERP) aimed to enable the patient appreciate the need to stop picking her skin or to stop picking to the verge of skin ulceration and the associated complications thereof has been the preferred mode of management *i.e. patient is encouraged to 'face her fears' and let obsessive thoughts occur without neutralizing them with compulsions*.

She has further been educated on links between increased frequencies of asthma symptoms with recurrent acute asthmatic attacks and the periovulatory and perimenstrual development of skin lesions that she reported experiencing and picking; these were of particular concern to the patient prior to explanation of the link. She continues to receive routine appropriate asthma treatment with relievers and spacers. She however remains uncompliant with prescribed oral steroids as she associates them with weight increase. She reports observed improvements in *picking control* associated with an awareness to inhibit the urge to pick. The use of pharmacological agents for ED have not been preferred as the patient generally exhibits a full ability to go about her normal duties without any physical or psychological challenges.

Preferred pharmacological treatment generally otherwise may include selective serotonin reuptake inhibitors (SSRIs), opioid antagonists and glutamatergic agents.[1] Some other pharmacological products have been documented in other literature in small trials as well.[1] Antipsychotic, antianxiety, antidepressant, and antiepileptic medications have all been used to treat skin picking with varying degrees of success.[18] Counselling within the scope of behavioural therapy that includes habit reversal training associated with awareness training, cognitive behavioural therapy, and acceptance and commitment therapy have been found to be effective treatment approaches.[19]

Prognosis of ED is characterized by its interferences with daily life though patients may take measures to further conceal this interference by not leaving home, wearing long sleeves and trousers even in heat, or by covering visible damage to skin with cosmetics and/or bandages as a result of attendant shame, embarrassment, and humiliation.[19] While some available evidence on ED indicates it can last between 5-21 years if left untreated, *many doctors on the contrary consider this disorder to be a permanent diagnosis*.[20]

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