Dermatology Practical & Conceptual

Dermatitis Artefacta: A Retrospective Descriptive Study on 46 Patients

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ABSTRACT

Introduction: Self-induced dermatoses are self-inflicted skin lesions, whose occurrence patient denies responsibility for.

Objectives: The aim of this study was to retrospectively investigate all the clinical records of dermatitis artefacta (DA) in order to put special focus on: a) epidemiological aspects; b) location, shape and additional features of the lesions; c) availability of psychiatric details in the records.

Methods: A retrospective observational descriptive study on 46 patients affected by dermatitis artefacta was conducted from January 2015 to March 2021. The only inclusion criterion was clinical or histological diagnosis of DA in patients for which we had clinical images.

Results: The most frequent type of lesions were erosions/excoriations and ulcers (14/46, 30.4% and 13/46, 28.3% respectively) followed by ecchymoses (9/46, 19.5%), vasculitis-like lesions (5/46, 10.9%), crusted plaques (3/46, 6.5%), scales (1/46, 2.2%) and erythema (1/46, 2.2%). Thirty-three percent of the medical records generically referred to the presence of psychiatric disorder, but none of them included a specific psychiatric diagnosis.

Conclusions: In our study the main dermatologic lesions observed in DA were represented by excoriations and ulcers and that the shape and location of the lesions are essential for a correct diagnosis.

Introduction

Self-induced dermatoses are self-inflicted skin lesions, whose occurrence patient denies responsibility for. Although self-induced dermatoses in the general population are underdiagnosed, making it difficult to ascertain their correct prevalence, they account for about 2% of the requests for dermatological consultation [1,2].

They are three-five times more frequent in women than in men, with greater prevalence in those with lower socio-economic status, and can occur at any age, with a higher frequency in early adulthood [3,4].

Similar epidemiological evidence is to be observed for dermatitis artefacta (DA), also known as patomimia), characterized by the induction of injuries or diseases in order to satisfy a conscious or unconscious desire to assume the sick role in the absence of external awards (unlike the malingering, in which skin damage may be inflicted for the purpose of secondary gain) [5,6].

In fact, DA is usually underdiagnosed due to diagnostic difficulty, which is probably why there are so few published series of DA [4-7,8]. A retrospective study of 57 patients reported a 2.8 higher prevalence in females than in males, with multiple lesions in 88% of patients: of these 57 patients, only 18% had a psychiatric diagnosis [4]. An epidemiological study conducted in Iran on 178 patients reported that anxiety disorders were common in these patients [7]. Most studies are limited to clinical cases that have aroused the clinician interest for their peculiar clinical expression.

DA etiopathogenesis is multifactorial and, interestingly, there is a major psychiatric component. Indeed, an association has been found between self-induced dermatoses and psychiatric disorders including depression, borderline personality disorder and post-traumatic stress disorder (PTSD) [9]. Moreover, onset of DA is often preceded by psychosocial stress especially during early development (eg loss of a parent, parental divorce and/or mistreatment) [10]. Therefore, it does not surprise that DA is duly considered in the current psychiatric nosology, being included in the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5) among the fictitious disorders. In other terms, just like in Münchhausen syndrome, patients create artefactual lesions or a disease to gain both hospital admission and the attention associated with having a difficult-to-identify condition [11,12].

Clinical appearance of DA depends on the method used for self-injuries. Excoriations and ulcers, dermatitis-like lesions, panniculitis, ecchymosis, and vasculitis-like lesions are all possible [13].

Sometimes the lesions show bizarre and obviously artificial aspect, surrounded by non-injured skin; however, they can mimic any disorder including pyoderma gangrenosum, intertriginous and flexural erythema, and ulcers, resembling rare tumors [14-19].

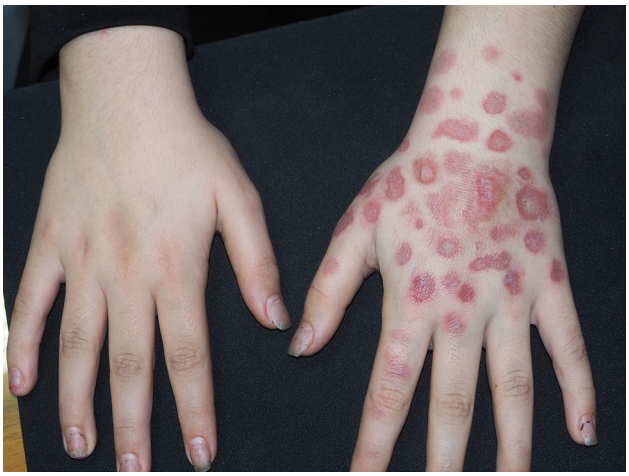

Figure 1. Adolescent patient with erythematous, annular lesions located exclusively on the back of the left hand.

Injuries might be produced by scratching, picking, biting, cutting, heat, ice cold or boiling water, and injectable chemicals. Lesions can have bizarre shape and distribution, with geometric, linear edges, clearly delimited by healthy skin,being quite frequently seen (Figures 1 and 2).

The diagnosis is difficult due a wide variety of possible differential diagnoses. The diversity of the means and the methods used by the patient to injure him/herself should be taken into consideration, together with the morphology of the lesions and the history [20]. Complications such as gangrene, abscess formation, or other life-threatening infections are also possible. Several anatomic sites may be involved, but they are usually confined to areas within easy reach [3]. The patients typical lack of concern for how disfiguring their lesions appear is amazingly disproportioned relative to the entity of their presentation. The patient history does not tend to corroborate the unusual cutaneous findings.

Objectives

The aim of this study was to retrospectively investigate all the clinical records of DA available at our Dermatological Unit, sampled over around six years, in order to put special focus on: a) epidemiological aspects; b) location, shape and additional features of the lesions, to better understand which of them could be pivotal for making a correct diagnosis; c) availability of psychiatric details in the records, given the above-mentioned connections of DA with psychopathology.

Methods

A retrospective observational descriptive study on 46 patients affected by DA was conducted at the Dermatology Unit of the University of Campania "Luigi Vanvitelli" from

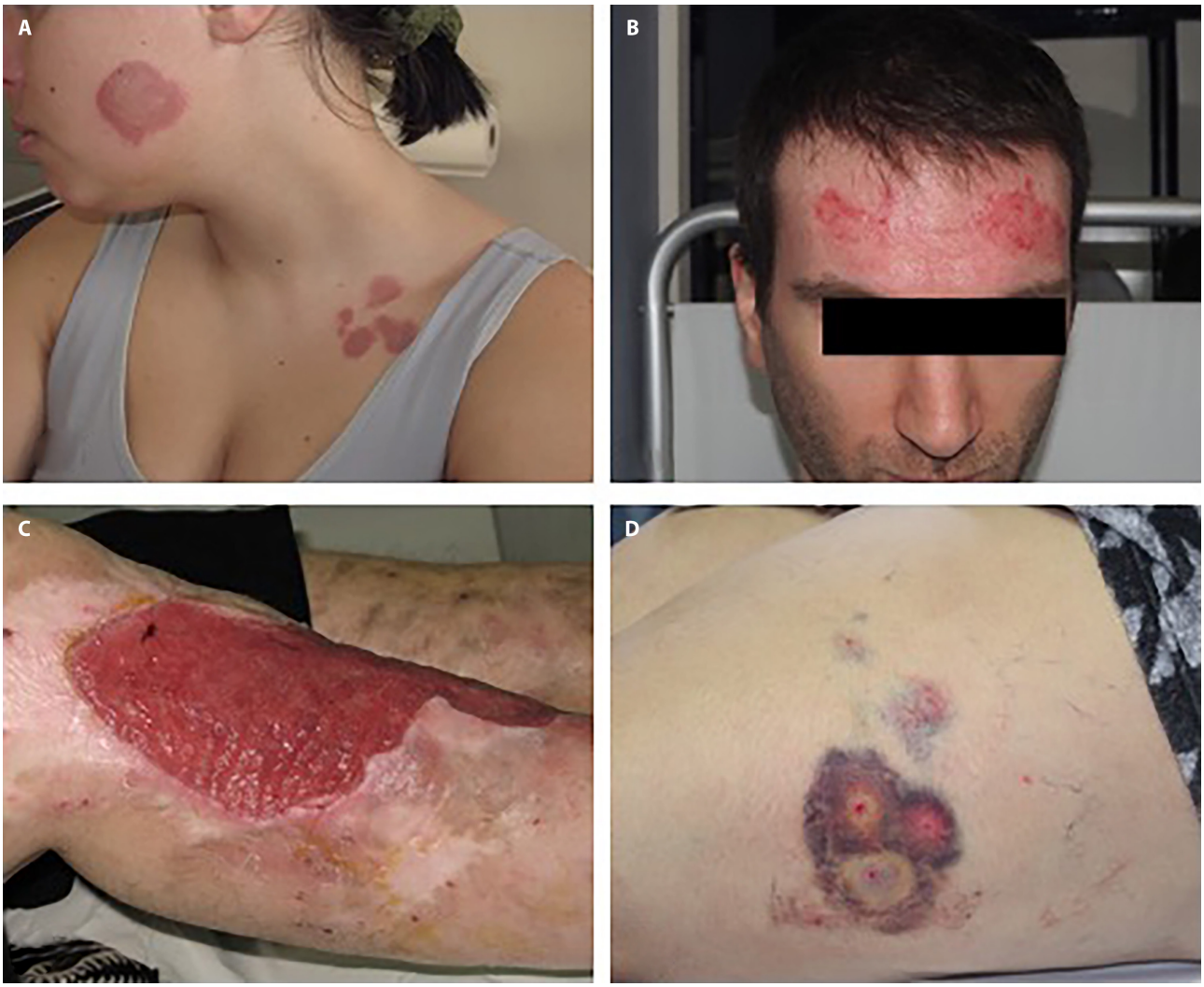

Figure 2. (A) Erythematous lesions localized on the face and clavicular region of a woman. (B) Self-induced excoriations localized on the forehead. (C) Self-induced ulcer localized on the right leg. (D). Ecchymotic lesions of the left leg.

January 2015 to March 2021. The only inclusion criterion was clinical or histological diagnosis of DA in patients for which we had clinical images. Patients suffering from concomitant inflammatory skin diseases were excluded from the study. The main clinical criteria considered for the diagnosis of DA were the presence of lesions with a regular and geometric appearance, a characteristic morphology that suggests the means used to self-mutilate, involvement of body sites easily reachable by the hands and localization of the lesions on the non-dominant side of the body. Regarding histological criteria the main characteristics considered were epidermal necrosis with modest inflammatory process in the dermis, vesico-bullous lesions with full thickness epidermal necrosis, clear margins and poor inflammatory infiltrate without eosinophils, the presence of skin material – dermal or subcutaneous foreign body granuloma. The following parameters were recorded for each patient: age, sex, type of lesion (excoriation, ulceration, erythema, patch, blister, desquamation, hyperpigmentation, vesicle, plaque, crust), site of the lesion (head/neck, upper and lower limbs, trunk, buttocks, acral regions or widespread), distribution of the lesion (random or with specific pattern, symmetrical or asymmetrical) and number of lesions (single or multiple). A histopathologic examination was performed in 23 patients (Table 1). Each participant gave written informed consent form.

Table 1. Patients features and location of lesions (N = 46).

Characteristic	
Gender	N (%)
• M	24 (52)
• F	22 (48)
Mean age, years	40
Location	N (%)
• Widespread	13 (28)
• Head/neck	10 (22)
• Lower limbs	8 (17)
• Upper limbs	6 (13)
• Trunk	4 (9)
• Acral	3 (7)
• Buttocks	2 (4)

Results

Images of DA belonging to 46 patients were evaluated. 24 patients were males (52%) and 22 females (48%) aged between 3 to 87 years (mean + SD = 40 + 24.5). The most frequent lesions distribution was widespread (13/46, 28%), followed by the head/neck area (10/46, 22%), lower limbs (8/46, 17%), upper limbs (6/46, 13%), trunk (4/46, 9%), acral region (3/46, 7%) and buttocks (2/46, 4%) (Table 1).

Lesions showed a regular and geometric appearance in 40% of patients and often the morphology was enough to suggest the means used to self-mutilate. In 20% of cases the injuries involved the side of the non-dominant body site.

All lesions were located on parts of the body easily reachable by the hands.

The most frequent type of lesions were erosions/excoriations and ulcers (14/46, 30.4% and 13/46, 28.3% respectively) followed by ecchymoses (9/46, 19.5%), vasculitis-like lesions (5/46, 10.9%), crusted plaques (3/46, 6.5%), scales (1/46, 2.2%) and erythema (1/46, 2.2%) (Table 2).

We also calculated the associations between different types of lesions and the affected anatomical sites. As regards the most frequent lesions the erosions/excoriations were localized most frequently in the head-neck area (38%) followed by localization in the upper and lower limbs (23% respectively) and finally in the trunk and buttocks (8% respectively); the ulcers had a mainly widespread distribution and in the head-neck area (36% rispectively) followed by the buttocks and lower limbs (14% rispectively) (Table 3).

Regarding the 23 cases subjected to biopsy and histological examination, most frequent type of lesions were erosions/excoriations and ulcers (8/23, 34.8% and 9/23, 39.1% respectively) followed by vasculitis-like lesions (4/23, 17.4%), crusted plaques (1/23, 4.3%), erythema (1/23, 4.3%) and ecchymosis (1/23, 4.3%).

Thirty-three % of the medical records generically referred to the presence of psychiatric symptoms (such as, for instance, altered mood, atypical behaviors, socio-relational difficulties), but none of them included a specific psychiatric diagnosis made according to conventional taxonomy.

Table 2. Clinical features of dermatitis artefacta.

Type of lesions	N (%)
• Erosions/excoriations	14 (30.4)
• Ulcers	13 (28.3)
• Ecchymoses	9 (19.5)
• Vasculiris-like lesions	5 (10.9)
• Crusted plaques	3 (6.5)
• Scales	1 (2.2)
• Erythema	1 (2.2)

Conclusions

Findings of this study may provide further evidence to the understanding of both the epidemiology and the phenomenology of DA. This disorder usually affects women more frequently, while in our study the M/F ratio was comparable [21]. Most frequently lesions were widespread or located in the head/neck area. Consistently with the data reported in the literature, erosions/excoriations and ulcers were the most frequent lesions, suggesting that this aspect could be an important clue for the correct diagnosis [22,23].

Histopathologic examination was performed in 23 cases, in which the patient presented lesions with clinical elements suggesting other skin conditions. The biopsy excluded the presence of specific elements of other diseases and therefore allowed, together with other anamnestic and clinical features, to perform a diagnosis of DA.

Lesions showed a regular and geometric appearance in 40% of patients and often the morphology was enough to suggest the means used to self-mutilate. In 20% of cases the injuries involved the side of the non-dominant body site. The following represent common characteristics in DA. We found that most ulcerated lesions and excoriation/erosions

Table 3. Associations between the different types of lesions and the anatomical sites.

Type of lesions	Widespread (%)	Head/neck (%)	Lower limbs (%)	Upper limbs (%)	Trunk (%)	Acral (%)	Buttocks (%)
Erosions/excoriations		38	23	23	8		8
• Ulcers	36	36	14		14		
• Ecchymoses	44		22	22%		11	
• Vasculiris-like lesions	60				20	20	
• Crusted plaques	33		33				33
• Scales							
• Erythema				100		100	

were caused by manipulation with the nails; most ecchymoses were caused by the sucking mechanism and that the vasculitis-like lesions were caused mainly by burning means.

Interestingly, no specific psychiatric diagnosis was reported in any medical records, highlighting how much this relevant aspect is usually underestimated. In our view, this appears to be a very critical point, since a full psychiatric evaluation is definitely required to clarify the diagnosis and to define the correct therapeutic intervention. Therefore, a clinical multidisciplinary approach, including also psychological and psychiatric assessments in the first place, would be recommendable to cope with this problem.

In conclusion, in our study the main dermatologic lesions observed in DA were represented by excoriations and ulcers and that the shape and location of the lesions are essential for a correct diagnosis. Further study is needed specially to clarify the psychological and/or psychiatric background associated to DA to improve the management of such a difficult to diagnose and to treat disorder.

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