

Characteristics of Psychogenic Pruritus or Functional Itch Disorder: A Controlled Study

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Psychogenic pruritus (Psych-P) is a type of chronic pruritus (CP) where pruritus is linked to psychosocial dynamics, the mainstay of the disorder, without a primary dermatosis or systemic aetiology that could explain it (1–3). A link with alexithymia and dissociative symptoms was recently reported (4).

However, an imprecision is still observed both in the scientific literature and in clinical practice, regarding diagnostic criteria, leading to inadequate management of different disorders where psychological features can coexist with pruritus. Psych-P is often mistaken for: idiopathic pruritus; psychodermatological disorders that are linked with a primary psychiatric diagnosis, namely, delusional infestation, where pruritus can also be present, or psychogenic excoriations, where patients scratch themselves, the lesions can sometimes be associated with pruritus but this is not the main cause for scratching, whose behaviour is disproportionate to pruritus intensity; secondary psychiatric comorbidities associated with other aetiologies of CP (1, 2).

Thus, the objectives of this study were: to highlight clinical characteristics of Psych-P; to increase accuracy in differentiating Psych-P from other types of CP.

MATERIALS AND METHODS

This report followed the STrengthening the Reporting of Observational studies in Epidemiology (STROBE) guidelines (5, 6).

A prospective case-control study was performed and patients were selected consecutively. The study ended when the number of patients defined by the population size was obtained.

Participants were selected during dermatology consultations at a Belgian general hospital in the Lille–Courtrai–Tournai Eurometropolis region. The project was submitted to the Saint Luc Hospital-Faculty Ethics Committee, on 3 January 2021, with approval on 30 April 2021 (2021/11JAN/008).

Study participants had to comply with the following characteristics: (i) Age ≥ 18 years; male or female sex. (ii) Patients' group: Psych-P (criteria of the French Psychodermatology Group) (1, 2, 7). (iii) Control group: non-psychogenic pruritus; evolution of more than 6 weeks. (iv) Patients had to be able to understand and agree to sign an informed consent form.

Sociodemographic characteristics, participants' medical history with relevance to the study (psychiatric or other medical history associated with distress), characteristics of pruritus and the criteria of the French Psychodermatology Group (1, 2, 7) were compared in both groups.

Statistical analysis and study size

The population size was calculated considering the results of the retrospective study conducted by Schneider et al. (8) (an approxi-

mate example of the prospective study we intended to conduct): with an alpha of 0.05 and a power of 90%, a sample of 24 patients and 24 controls would enable the detection of a significant difference between the groups (population size). Data were analysed with Stata/IC 16 software (StataCorp LP, College Station, TX, USA). Continuous variables were expressed as mean $\pm$ standard deviation and interval, and categorical variables as frequencies. Student's *t*-test or Mann–Witney *U* test were used to compare means between groups. Contingency table analysis comparing rates between matched samples was performed using the χ^2 test or Fisher's exact test. A *p*-value < 0.05 was considered significant.

RESULTS

Participants

During patient recruitment (May 2021–June 2023), 3 patients with Psych-P declined to participate and 1 patient was excluded (inability to understand the questions). Two patients from the control group were excluded (inability to understand or a chronic condition that could limit their ability to take part in the study); 7 patients did not wish to participate.

There was no significant difference between the socio-demographic characteristics of the 2 groups (Table SI). The Non-Psych CP group included: 21 patients with a primary dermatosis (including contact eczema, seborrheic dermatitis, stasis dermatitis, asteatotic eczema, atopic dermatitis, nummular eczema, psoriasis, sebopsoriasis, lichen planus, chronic urticaria, scabiosis); 3 patients with a systemic aetiology (end-stage renal disease, diabetes, primary sclerosing cholangitis).

Characteristics of Psych-P

Most patients were female (79%), with a mean age of 62 years (± 16.1) and a variable itching localization, more frequently localized than generalized, with a duration of more than 1 year (71%). The majority of patients were taking or had already taken an antidepressant or anxiolytic treatment (63%) and had a current or past diagnosis of psychiatric disorder (67%), which was more frequent in Psych-P compared with controls, but without a significant difference. Self-inflicted skin lesions (typically, excoriations) were not frequently observed and dysesthesia was not a common symptom. Overall, there was a significant difference ($p < 0.005$) between Psych-P and controls for the following characteristics (more common in Psych-P): negative impact of the symptoms on sleep; current treatment for sleep problems; variations in intensity associated

with distress; pruritus that was worse at rest; nycthemeral variability (variations in symptoms throughout a day/night cycle); activity described as a relieving factor; a link between pruritus and a difficult socio-familial context that could have psychological repercussions; improvement of pruritus by psychotherapy (**Table I**).

DISCUSSION

According to the criteria of the French Psychodermatology Group, patients with Psych-P must have at least 3 of the following 7 optional criteria: a chronological relationship

Table I. Psychogenic pruritus and control group: medical history and characteristics of pruritus

Medical history and characteristics of pruritus	Patients, psychogenic pruritus (n = 24)	Controls (n = 24)	p-value
Psychotropic drugs, n (%)			0.149**
- Yes	15 (62.5)	10 (41.7)	
- No	9 (37.5)	14 (58.3)	
Psychiatric disorder, n (%)			0.082**
- Yes	16 (66.7)	10 (41.7)	
- No	8 (33.3)	14 (58.3)	
Psychotherapy, n (%)			0.016**
- Yes	9 (37.5)	2 (8.3)	
- No	15 (62.5)	22 (91.7)	
Difficult social and family context (link with pruritus), n (%)			<0.001**
- Yes	23 (95.8)	7 (29.2)	
- No	1 (4.2)	17 (70.8)	
Significant personal medical history, n (%)			0.540**
- Yes	17 (70.8)	15 (62.5)	
- No	7 (29.2)	9 (37.5)	
Variability of pruritus, n (%)			0.010**
- Only at night/evening	2 (8.3)	0 (0)	
- Only in daytime	2 (8.3)	10 (41.7)	
- Day and night	20 (83.3)	14 (58.3)	
Localized or generalized pruritus, n (%)			0.350**
- Generalized	9 (37.5)	6 (25)	
- Localized	15 (62.5)	18 (75)	
Dysesthesia, n (%)			0.330**
- Yes	5 (20.8)	8 (33.3)	
- No	19 (79.2)	16 (66.7)	
Severity – verbal rating scale 0–3, mean ± SD (range)	2.3 ± 0.7 (1.8–2.4)	2.1 ± 0.6 (2.1–2.6)	0.298*
Self-inflicted lesions, n (%)			0.350**
- Yes	6 (25)	9 (37.5)	
- No	18 (75)	15 (62.5)	
Pruritus induced or worsened by distress, n (%)			0.042**
- Yes	17 (70.8)	10 (41.7)	
- No	7 (29.2)	14 (58.3)	
Pruritus at rest, n (%)			<0.001**
- Yes	20 (83.3)	0 (0)	
- No	4 (16.7)	24 (100)	
Pruritus that is improved by activity, n (%)			<0.001**
- Yes	12 (50)	0 (0)	
- No	12 (50)	24 (100)	
Negative impact on sleep by pruritus, n (%)			0.002**
- Yes	16 (66.7)	8 (16.7)	
- No	8 (33.3)	16 (33.3)	
Current treatment for sleep problems, n (%)			0.001**
- Yes	16 (66.7)	5 (20.8)	
- No	8 (33.3)	19 (79.2)	
Duration of pruritus, n (%)			0.365**
- < 1 year	7 (29.2)	10 (41.7)	
- > 1 year	17 (70.8)	14 (58.3)	

SD: standard deviation; *Student's *t*-test; ** χ^2 test or Fisher's exact test when appropriate. Statistical significance $p < 0.05$.

between the onset of pruritus and life events that could have psychological repercussions; variations in intensity associated with distress; nycthemeral variations; predominance at rest; associated psychological or psychiatric disorder; pruritus improved by psychotropic medication; pruritus improved by psychotherapy (1, 2). Our results have strengthened these criteria: for instance, dysesthesia and self-inflicted skin lesions (particularly excoriations) were not common in this study, thus reinforcing that they are not a common feature of Psych-P and should not be part of the criteria. Our results also helped to identify additional characteristics: activity as a relieving factor and higher prevalence of sleep problems.

In this study, the criteria that were more frequently identified and had a significant difference ($p < 0.005$) compared with controls were: a socio-familial context that could have psychological repercussions with a chronological link with the onset/worsening of pruritus; the link between the evolution of symptoms and distress; the predominance of pruritus at rest; nycthemeral variations. It should be highlighted that the first 2 criteria were also observed in other aetiologies of CP where distress could also be linked with the pathophysiology of the disease (psychophysiological dermatoses) (8–10), underlining the need to diagnose Psych-P according to several criteria, to avoid over- or under-diagnosing it. Furthermore, a difficult socio-familial context, such as a breakdown of meaningful interpersonal relationships, was commonly identified and perceived as a stress-generating experience, and, although there was a link with the clinical evolution of symptoms, a connection between distress related to those experiences and the symptoms was not always clearly identified by the patient and should then be explored through a psychodermatological approach. Moreover, a predominance of pruritus at rest and nycthemeral variations appeared to be the 2 most specific criteria. Improvement of pruritus with activity could possibly be a new optional criterion, in line with the common criterion of the presence of pruritus at rest. If patients were not involved in activities that would allow positive distraction, they would probably focus more on life events that could have psychological repercussions. In psychogenic pruritus, fits of pruritus would be triggered when defence mechanisms in relation to the experience of emotional conflicts collapse (11). The variations in symptoms throughout a day/night cycle could be related to variations in intensity associated with moments of higher emotional distress or more time (such as at rest) to focus on stressful life events and/or the bodily sensations (pruritus). Selective attention to bodily sensations, with subsequent possible catastrophic interpretation and somatosensory amplification, could lead to persistent symptoms (chronic pruritus), as reported for functional disorders (12).

We share our results, hoping to raise awareness of the diagnosis of Psych-P, highlighting that it has a set of specific criteria, knowledge of which is relevant to clinical practice. Limitations of this study include the relatively

small sample size. Further prospective studies are required to strengthen our conclusions and enlarge the available scientific literature on Psych-P.

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IRB approval status: The study was approved by the Institutional Review Board of the Université Catholique de Louvain (2021/11JAN/008); the research was performed in accordance with the ethical standards set forth in the Declaration of Helsinki (1964) and its later amendments. The patient records and information were anonymized before analysis.

The authors have no conflicts of interest to declare.

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