Oral Naltrexone in the Treatment of Chronic Psychogenic Pruritus: A Case Report

Asli Aytulun a, Elcin Ozcelik-Eroglu a, Mevhibe Irem Yildiz a, Basak Yalici-Armagan b, Mumin Kazim Yazici a

a Department of Psychiatry, Hacettepe University School of Medicine, Ankara, Turkey, b Department of Dermatology and Venereology, Hacettepe University School of Medicine, Ankara, Turkey

Abstract
Psychogenic pruritus (PP) is usually an exclusion diagnosis that cannot be explained with organic reasons, is triggered or aggravated by psychological factors. We report a case of a female patient with an itching complaint for thirty-five years, the onset or worsening of which was preceded by marital conflicts. After the patient had been diagnosed with PP, naltrexone 25 mg/day was started orally. Her complaints of itching urge and pruritis completely ended since the beginning of the medication. PP is thought to occur mainly through the opioid receptors of the central nervous system. Oral opioid receptor antagonist naltrexone can be used safely in the treatment of PP in terms of its potential to reduce itching and itching behavior as well as its side effect profile.

INTRODUCTION

Pruritus or itch was firstly defined as an unpleasant sensation that caused a desire to scratch [1]. Pruritus can be observed in systemic, psychiatric and skin diseases. Psychogenic pruritus (PP) is usually an exclusion diagnosis; and also used to refer to somatoform pruritus that cannot be explained for organic reasons, is triggered or aggravated by psychological factors [2].

According to French Psychodermatology Group (FPDG)’s diagnostic criteria, to diagnose PP, all of the three compulsory criteria and at least three of the seven optional criteria must be met (Table 1) [3]. Naltrexone is an oral opioid receptor antagonist has not yet been approved for the treatment of a primary dermatological disease by the FDA, but it is recommended in resistant pruritus cases such as prurigo nodularis, cholestatic pruritus [4, 5]. It has also been reported to be useful in PP [5, 6].

In this context, we will discuss the role of naltrexone in the treatment of a patient who had continuous itching complaints for about 35 years and diagnosed with PP.

Table 1. Diagnostic criteria for functional itch disorder (psychogenic pruritus)

<table>
<thead>
<tr>
<th>Compulsory criteria</th>
<th>Optional criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Localized or generalized pruritus sine materia (without primary skin lesion)</td>
<td>• A chronological relationship between the occurrence of itch and one or several life events that could have psychological repercussions</td>
</tr>
<tr>
<td>• Chronic pruritus (&gt;6 weeks)</td>
<td>• Variations in intensity associated with stress</td>
</tr>
<tr>
<td>• No somatic cause</td>
<td>• Nocturnal variations</td>
</tr>
<tr>
<td></td>
<td>• Predominance during rest or inaction</td>
</tr>
<tr>
<td></td>
<td>• Associated psychological disorder</td>
</tr>
<tr>
<td></td>
<td>• Pruritus could be improved by psychotropics</td>
</tr>
<tr>
<td></td>
<td>• Pruritus could be improved by psychotherapies</td>
</tr>
</tbody>
</table>

Corresponding author: Asli Aytulun, E-Mail: asliaytulun@hacettepe.edu.tr

A 78-year-old female patient referred to our clinic by a dermatologist because of itching complaints in various parts of her body. Her complaints were felt in the medial and lateral areas of the eyelash bottoms, inside the ears and nose, between the fingers, on the back and arms. The onset of the symptoms was preceded by marital conflict 35 years ago. She stated that the feeling of itching aggravated when she was upset and bored, the desire to scratch continued throughout the day but not during sleep. Because she couldn’t scratch her body in crowd, she had avoided going out. She did not experience any other somatic complaint. Her mother was similarly itchy when she felt stressful, however, she did not seek any medical consultations.

Her laboratory parameters including hemogram, liver and renal function tests had been performed and neither any organic disorder had been detected, nor any response to dermatological treatments had been seen. She had hypertension and essential tremor for which she had been on medication with antihypertensive drugs for about ten years.

Her cardiologist started escitalopram 20 mg/day considering that the patient’s paroxysmal hypertension might be related to her anxiety, but there was no change in her itch complaints with this medication. Structured Clinical Interview for DSM-5 (Clinician Version) [7] was administrated and the patient was diagnosed with “somatic symptom disorder”. The patient was looking her age, her speech was coherent and goal-directed. She was willing to interview and kept the eye contact. Her mood was anxious, her affective expression was broad and appropriate, her thought process was logical. There were no perceptual abnormalities; reality testing was intact. The thought content was marked by preoccupation with itching. The patient was examined in our clinic with these complaints one year ago and verbal informed consent for this case presentation was obtained. Excoriated and crusted lesions on her back and arm were determined in the skin examination. The patient was diagnosed with PP and naltrexone 25 mg/day was started orally. She reported that her complaints, pruritus and itching urge, had completely ended since the beginning of the medication. During the recent one-year follow-up examinations, the patient has not complained about itching; and the treatment has been continued with the same dose of naltrexone.

In this case report the complaints related to the chronic course of PP, which did not respond to dermatological treatments, regressed completely shortly after the initiation of oral naltrexone treatment and did not recur with the same dose. Although there are clinical intervention studies [5, 8] and case reports [6] suggesting that naltrexone may be effective in PP, to our knowledge, there is no other case that responded to naltrexone treatment so quickly and completely regressed in a very short time has been reported.

Psychogenic pruritus treatment consists of both dermatological and psychiatric approaches. Dermatological treatment is supportive, necessary for preventing secondary complications and aggravating factors [9]. Psychiatric treatment aims to correct the underlying psychopathology and constitutes the main part of the treatment. In pharmacotherapy selective serotonin reuptake inhibitors (SSRIs), selective serotonin and norepinephrine reuptake inhibitors, tricyclic antidepressants (amitriptyline and doxepin), a neuroleptic pimozide, and an atypical antipsychotic olanzapine may be used accordingly. Paroxetine from the SSRI class and mirtazapine, a noradrenergic and specific serotonergenic antidepressant, have been reported to be useful in persistent itching [9].

Psychotherapies aiming at gaining insight into triggering and sustaining psychological factors may be helpful in patients that do not respond to other treatments [10].

Psychogenic pruritus is thought to be a kind of central pruritus, occurring mainly through the opioid receptors of the CNS, and is poor responsive to peripheral histamine blockage [11]. Possible mechanisms in opioid-mediated pruritus include direct binding to opioid receptors in the CNS besides the interaction with serotonin or 5-hydroxytryptamin receptors. Reduced itching with opioid antagonists also indicates that histamine release is not the only mechanism in itching caused by opioids; µ-opioid receptors also play a role in the central mediated response [12].

Addictive behavior model can be used to explain compulsive skin picking disorders which may be observed in people with irregularities in the dopaminergic reward system. Thus, opioid antagonists may also be used in the treatment [13, 14]. Opioids inhibit the release of GABA from ventral tegmental area (VTA) by stimulating µ-opioid receptors, resulting in increased dopamine release from the nucleus accumbens [15]. Naltrexone inhibits dopamine neurons in the VTA, rendering dopamine function ineffective in the nucleus accumbens and adjacent basal brain region. Dopamine in these regions is involved in the subjective sensation of pleasure and desire [16]. The presence of opioid antagonists reduce compulsive skin picking behavior, suggesting that skin picking urges may have some common neurobiological mechanisms with addictive behaviors [13, 17, 18]. Skin picking is considered a form of self-injurious behavior and naltrexone has been reported to be effective in the treatment of it [19].

In this case of PP the rapid and complete response to the naltrexone may be associated with blocking the opioid receptors in the CNS, causing itching sensation, as well as reducing the itching urge with its effect on dopaminergic pathways. This case report highlights the potential benefit of naltrexone as a possible treatment option for PP. Further studies are needed to confirm the efficacy and safety of naltrexone treatment for PP.
REFERENCES


