



# A rare case report: chronic generalized idiopathic pruritus

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**Background:** Generalized chronic pruritus (CP) can be associated with seborrheic dermatitis and psoriasis but often can present without any noticeable diagnosis or obvious skin lesion. When not related to a clear diagnosis, CP can be characterized as idiopathic pruritus. CP is both a diagnostically and therapeutically challenging presentation due to the variety of systemic, dermatological, neurological, and psychogenic diseases that must be ruled out before diagnosing idiopathic pruritus. This presentation is often overlooked but can lead to a greatly diminished quality of life for patients who present with idiopathic generalized pruritus. The course of treatment will vary between providers and specialties, however, most dermatologists will attempt control with antihistamines, topical steroids, or oral steroids. The use of gabapentinoids for the treatment of CP is understudied. Gabapentin was initially developed as an antiepileptic that has since been approved to treat neuropathic pain and has a common off-label use in dermatology and can be used to effectively treat CP.

**Case Description:** Here we present a case of a 56-year-old Caucasian male who presented to the outpatient dermatology clinic with new-onset, diffuse, and intense pruritic symptoms that gradually progressed over a period of seven weeks. This case study details a patient with Idiopathic generalized pruritus previously uncontrolled that was well-controlled with the use of gabapentin after trials of other common treatments failed.

**Conclusions:** The understudied off-label use of gabapentin in the case of generalized chronic idiopathic pruritus should be explored and later implemented as a mainstay for patients suffering from uncontrolled CP as it was shown to completely eliminate pruritic symptoms and improve the quality of life for this patient.

**Keywords:** Generalized chronic pruritus (generalized CP); idiopathic pruritus; gabapentin; case report

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## Introduction

Generalized chronic pruritus (CP) can commonly be associated with seborrheic dermatitis and psoriasis but appears often without any noticeable skin lesion or obvious diagnosis (1)—and is considered a diagnostically and therapeutically challenging situation. Pruritus can arise from a variety of dermatological, systemic, neurological, and psychogenic diseases, classified based on the potential

underlying disease. The presentation of the generalized idiopathic pruritic symptoms is often overlooked yet is deeply troubling for the patients who experience this symptomatology. After 6 weeks of CP, it is considered a chronic condition and must warrant greater expenditure in treatment. Especially in older adults—defined as those  $\geq 65$  years—this has been challenging pathology for dermatologists to treat.

The reported prevalence of CP among adults varies from

11.5% to 38.9% of the respective study populations (1). Chronic and acute pruritus is highly variable in etiology, it can become a difficult-to-manage issue that can greatly impact the quality of life of the patients.

The International Forum for the Study of Itch (IFSI) has further classified CP into six unique categories of different pruritic signs. They separated the etiology into dermatological diseases, systemic diseases, neurological, psychosocial, mixed, and unknown or other. In greater complication, the itch can also be known to be multifactorial for chronic patients which future complicates treatment and diagnosis. Most pertinently, neuropathic itch could be related to the greater sensitization of the neurons that could be related to either peripheral or central nervous systems<sup>2</sup>. Similarly, in an evaluation of BrachiRadial Pruritus (BRP) using electroneuromyography (ENMG) it is stated that pain and pruritus are conducted using the same nerve fiber. And that sun-exposed dermatomes on the arm (C7) were more likely to have this pruritus (BRP). Suggesting that solar radiation causing pain (solar erythema) may be behind the pruritis (2).

In 2021, a study conducted found that only 38.3% of providers prescribed gabapentin for CP, with most (86.5%) of those saying they did not have the knowledge nor experience with the medication (1). While the course of treatment varies amongst providers and specialties, most dermatologists attempt to begin treatment with antihistamines, topical steroids, or oral steroids. The lack

of knowledge surrounding the use of gabapentinoids in the treatment of CP should be explored, studied, and later implemented in the treatment of pruritus. Gabapentin was initially developed as an antiepileptic that has since been approved to treat neuropathic pain and has a common off-label use in dermatology and can be used to effectively treat CP (3).

Here we present a case of chronic idiopathic generalized pruritus that has been well-controlled with the use of gabapentin. We present this case in accordance with the CARE reporting checklist (available at <https://acr.amegroups.com/article/view/10.21037/acr-23-40/rc>).

### Case presentation

A 56-year-old Caucasian male presented to the outpatient dermatology clinic with new-onset, diffuse, and intense pruritic symptoms that gradually progressed over a period of seven weeks. The symptoms began at the lower extremities and advanced to present on the upper extremities as well. The patient has a decreased quality of life with an inability to work or sleep due to itching and the condition additionally seemed to be exacerbated by stress. History and physical exam revealed excoriations on both lower and upper extremities localized to the flexor surfaces (*Figure 1*). The physical exam did not reveal any specific nodules and was positive for post-inflammatory hyperpigmentation and pruritic nodules along the upper and lower extremities. A biopsy was not prompted due to a lack of a specific lesion.

The patient attempted to relieve the itch with over-the-counter anti-itch creams and low-dose steroids with no improvement before presenting to the clinic. The patient's past medical history is positive for possible prediabetes and joint pain and currently takes only Ozempic for medications, to which he is non-adherent. After an extensive review of systems, the patient is positive only for a history of allergic symptoms to the environment that may be exacerbated by sun exposure of which have been well-controlled with over-the-counter first-generation antihistamines. Bloodwork demonstrated slight elevations in aspartate aminotransferase/alanine transaminase (AST/ALT), abdominal ultrasound and cross-sectional imaging of computed tomography (CT) abdomen and pelvis was negative for biliary tree involvement and perinuclear anti-neutrophil cytoplasmic antibodies (P-ANCA) was normal.

A differential diagnosis of an unusual presentation of atopic dermatitis was given. The patient was started on a failed trial of topical and oral steroids with no relief of the

#### Highlight box

##### Key findings

- This patient experienced complete resolution of symptomatology after utilizing gabapentin, after failing main-stay therapies.

##### What is known and what is new?

- Idiopathic generalized pruritus is a diagnosis of exclusion and is often difficult for providers to treat. Chronic pruritus (CP) is treated with a course of antihistamines and steroids.
- This manuscript details a case of a patient with generalized idiopathic pruritus that failed common treatments and was given gabapentin. The patient experienced complete resolution of symptomatology.

##### What is the implication, and what should change now?

- With patients who present with uncontrolled idiopathic pruritus, a trial of low-dose gabapentin should be considered. Studies should be done to understand the mechanisms of efficacy of this treatment for this indication to promote usage and an improvement of patient outcomes.



**Figure 1** Post-inflammatory pruritic nodules seen during acute exacerbation.

pruritic symptoms. At follow-up, the patient was given a trial of gabapentin 1,000 mg with a new differential of chronic pain presenting as pruritus, as seen in chronic idiopathic pruritus. Due to the progression of the disease 1,000 mg was used to hopefully achieve relief and stop progression and was justified with normal renal function in this case.

The patient has been titrated down to 500 mg steady state of gabapentin and has now experienced a complete resolution of symptomatology.

All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committees and with the Helsinki Declaration (as revised in 2013). Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the editorial office of this journal.

## Discussion

Generalized pruritus is a common condition, often associated with seborrheic dermatitis and psoriasis. In some cases, pruritus occurs without any associated skin pathologies. In these cases, the variable etiologies and distinguishable characteristics make it diagnostically and therapeutically difficult to approach. Pruritus can be persistent and negatively affects the quality of life, there is a necessity to more adequately understand the plethora

of etiologies and treatments that involve this generalized condition. In this case study, titrated oral steroids and topical triamcinolone were ineffective for generalized pruritus and symptoms were instead effectively managed through the use of gabapentin (4).

Treatment of pruritus of unknown origin often involves an approach of antihistamine and steroidal treatments, but the use of gabapentin has been priorly cited as an effective treatment when the typical approaches have failed (5). The efficacy of gabapentin and other medications like amitriptyline in these cases suggests that cases of generalized pruritus may often have neuropathic origins. As a result, it may be indicated to consider neuropathic etiologies for generalized pruritus of unknown origin, and additionally consider gabapentin as treatment. Amitriptyline is commonly considered as an alternative in cases like this but was avoided here due to the larger side effect profile (4).

## Conclusions

To summarize, we present a case of generalized CP in a 56-year-old Caucasian male presenting with an unknown etiology. After ineffective treatments with antihistamines, titrated oral steroids, and topical triamcinolone, gabapentin was found to be the most effective therapeutic approach. This points to a neuropathic etiology underlying their generalized CP and sets a precedent for the consideration and use of gabapentin in such cases. We recommend further research to be done in this area to determine both the efficacy and safety of using gabapentin for CP.

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## Footnote

*Reporting Checklist:* The authors have completed the CARE reporting checklist. Available at <https://acr.amegroups.com/article/view/10.21037/acr-23-40/rc>

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*Ethical Statement:* The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committees and with the Helsinki Declaration (as revised in 2013). Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the editorial office of this journal.

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