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# "Unraveling the Uncommon: A Case Report of Cholinergic Urticaria Associated with Pityriasis Versicolor in a Postmenopausal Woman"

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## ABSTRACT

Pityriasis versicolor, characterized by pigmentary changes due to Malassezia yeast colonization, is a common cutaneous fungal infection. However, its association with cholinergic urticaria is rare. We present a case of a 52-year-old postmenopausal woman with persistent sore throat and hypopigmented, scaly lesions on her arms and thighs, accompanied by severe Pruritis. Concerns regarding hormonal changes post-menopause prompted consultation with an allergist. Referral to a dermatologist revealed cholinergic urticaria associated with pityriasis versicolor, a rare fungal infection. Treatment with luliconazole, fluconazole, and cyproheptadine led to a significant improvement in her symptoms. This case highlights the importance of considering uncommon presentations and interdisciplinary collaboration in managing complex dermatological conditions.

## INTRODUCTION

Pityriasis versicolor is one of the most common disorders of pigmentation in the world. It is a cutaneous, superficial fungal infection characterized by skin pigmentary changes due to colonization of the stratum corneum by a lipophilic fungus in the normal flora of the skin, known as Malassezia furfur and M. globosa.

These Malassezia yeasts, discovered in 75-80% of healthy subjects, can cause pityriasis versicolor when the yeast converts to its mycelial form after exposure to certain predisposing factors, such as heat, moisture, occlusion, depressed cellular immunity status, and other factors. Also, it has been suggested that skin pigmentary changes of pityriasis versicolor can occur as either hyperpigmented or hypopigmented lesions in accordance with interactions between Malassezia yeasts and skin characteristics, such as lipoperoxidation process, Stimulation of inflammatory cells on melanocytes, and increased thickness of keratin layer. However, the precise factors that enhance susceptibility to Malassezia yeasts and provoke pityriasis versicolor have are not yet fully understood[1].

## CASE DESCRIPTION

A 52-year-old woman who works as a homemaker came to the outpatient department complaining of a persistent sore throat that had lasted for a month. She had also developed hypopigmented scaly circular areas on her arms and thighs that had been there for about two months, along with excruciating itching.

The patient was worried about any potential connection between her symptoms and hormone changes because she went through menopause two months ago. She also reported severe dry skin and urticaria after taking night time hot baths, in addition to a history of generalized pruritus preceding menstruation spanning several years. Furthermore, the patient had been receiving homeopathic treatment for arthritis for the past five years.

For an initial consultation, the patient sought advice from a pulmonologist, who specializes in allergies.

For two weeks, the patient was prescribed with Tab N-acetylcysteine 600mg BD and Tab Bilastine+Montelukast to relieve throat irritation.

Patient were referred to a dermatologist after the pulmonologist determined they were unusual.

First appearing on the upper limbs, the patches were becoming larger and more numerous, and they were extremely itchy. They also appeared on the thighs over time in a light tone before eventually manifesting into white patches. After the dermatologist's consultation, the disease was determined to be cholinergic urticaria associated with pityriasis versicolor, a rare fungal infection.

The patient appeared with more than seven separate, circular lesions on the thighs and upper limbs when she was referred to the hospital. These patches ranged from 3mm to 5cm in size, with clearly defined borders and no inflammation. The hypopigmented lesions were covered with fine, scaly, ptyriasis-like flakes. The patient's family history did not reveal any skin problems, and standard blood tests revealed normal findings on the day of the consultation, with the exception of an increased IgE level of 2000 UI/ml.

The dermatologist recommended Ritch creamy lotion twice daily, Luliconazole cream twice daily and Tab Cyproheptadine 4 mg at bedtime for 15 days coupled with a one-day prescription of Tab. Fluconazole 400 mg at night. Following a comprehensive evaluation at the 15-day mark, the patient demonstrated notable progress with reduced itching and diminished white areas, the treatment protocol was adjusted accordingly. Luliconazole cream was prescribed for twice-daily application, while Tab. Cyproheptadine 4 mg was recommended to be taken at bedtime thrice weekly over a 30-day period.

Subsequently, in light of the patient's symptomatic improvement, therapeutic adjustments were made to incorporate Tacrolimus ointment at bedtime, Tab Cyproheptadine 4mg at bedtime thrice weekly, and Calosoft AF lotion [calamine and Aloe vera] twice daily. A follow-up appointment had been scheduled for reevaluation after a period of 90 days.

## DISCUSSION

M. Furfur and the other related species of the genus Malassezia, the causative agents of Pityriasis versicolor, normally inhabit on human skin in amounts which are undetectable on routine Potassium hydroxide (KOH) examination of stratum corneum. In most cases, Pityriasis versicolor represents a shift in the relationship between the yeast and the human skin. The factors which lead to the development of pityriasis versicolor are multiple. However, the environmental factors and the individual host susceptibility are among the major contributors. A high temperature and increased humidity in the tropical climates favour the disease. Oily skin, poor nutrition, immunodeficiency, pregnancy and corticosteroid use particularly in temperate climates[2].

A case report described an uncommon presentation of Pityriasis versicolor; hyper and hypopigmentation in the same patient with variable treatment response. In this case a 23-year-old lady presented with asymptomatic rash all over her upper trunk and upper extremities for 5 years. On examination, the lesions were symmetrically distributed hyperpigmented, round to oval macules with fine scales predominantly involving intertriginous areas neck, axilla, inter and inframammary areas where as similar hypopigmented lesions were present over the back, chest and bilateral upper limbs. Direct KOH skin smear revealed fungal elements with a characteristic 'spaghetti and meatball' pattern. Treatment with oral ketoconazole 200 mg daily for 7 days and Topical ketoconazole twice daily for one month, led to the complete resolution of hyperpigmented lesions , with a marked accentuation of hypopigmented ones over the previous sites[3].

In another case report, A 40-year-old male patient came with complaints of multiple asymptomatic hypopigmented macules over dorsal aspects of both hands and wrist for the past one and a half months. There were no such lesions on any other parts of the body. The scaling of the macules became prominent on stretching the affected skin (positive Zireli's sign). The examination of hair, nail and mucous membrane was unremarkable, KOH examination of the skin scrapings was done which showed multiple short hyphae and spores. The patient was prescribed topical Sertaconazole 2% cream twice daily and oral fluconazole 400 mg weekly for two weeks[4].

In our case, the patient presented with seven isolated, round patches on the upper limbs and thighs. These patches had well-defined borders, were not inflamed, and varied in size. The hypopigmented lesions were covered with scales resembling pityriasis. Appropriate treatment using antifungals, moisturising creams, Immunosuppressants and antihistamines helped in the recovery of the patient.

## CONCLUSION

In conclusion, this case report highlights the multifaceted nature of pityriasis versicolor, a common fungal infection that can present with a variety of symptoms and can be exacerbated by predisposing factors such as hormonal changes, heat, and moisture. The patient's presentation, including persistent sore throat, hypopigmented lesions, extreme itching, and a history of skin sensitivities, underscores the importance of a thorough medical evaluation to accurately diagnose and manage the condition.

The collaborative approach involving specialists in pulmonology, dermatology, and allergy was instrumental in identifying and treating the patient's condition effectively. Treatment with antifungal agents such as luliconazole and fluconazole, Immunosuppressants such as tacrolimus along with symptomatic relief with Cyproheptadine, led to significant improvement in symptoms and resolution of the skin lesions.

This case serves as a reminder of the importance of considering fungal infections in the differential diagnosis of skin disorders, particularly in the context of atypical presentations or exacerbating factors. Additionally, it emphasizes the value of interdisciplinary collaboration in providing comprehensive care for patients with complex medical presentations.

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## CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

## ETHICAL STATEMENT

Ethical approval is not applicable in this case report.

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