

TELOGEN EFFLUVIUM: EXPLORING THE INTERSECTION OF DERMATOLOGY, PSYCHOLOGY, AND PUBLIC HEALTH

Osmar da Cruz Catharin

<http://lattes.cnpq.br/3889014451840542>

Jaqueline Giselle Farias Fernandes

lattes.cnpq.br/3911317952894624

Sara Mendonça Chahla

Giovana Pivelli Usberco

Lorena Martins Pereira França Santos

<http://lattes.cnpq.br/9815731769007807>

Kácio da Silva Mourão

<http://lattes.cnpq.br/6937134959362975>

Paula Regina de Oliveira Santos

<http://lattes.cnpq.br/0438523818833022>

Italo Fornazari

Leonardo Cortes de Aguiar Franco

<http://lattes.cnpq.br/5043348537584359>

Laysa Karolline Fioravanti de Lima

<http://lattes.cnpq.br/7314928762850871>

Laura Eloi Lelis

<http://lattes.cnpq.br/2242476380924829>

Marina Vilela Silva

Mauricio Lopes da Silva Netto

<http://lattes.cnpq.br/4791743372358340>

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Abstract: **INTRODUCTION** Telogen Effluvium (TE) is a common non-scarring hair loss condition characterized by the premature transition of hair follicles from the growth phase to the resting phase, leading to diffuse hair shedding. TE is often triggered by physical and emotional stressors, hormonal changes, and systemic illnesses. This review explores the prevalence of TE, its psychological impact, economic barriers to treatment, and the challenges in diagnosis and management, particularly within the Brazilian public health context. **OBJETIVE** To explore and review the multifaceted aspects of Telogen Effluvium, focusing on its prevalence, psychological impact, economic barriers, and the challenges in diagnosis and treatment, with particular emphasis on the public health context in Brazil. **METHODS** This is a narrative review which included studies in the MEDLINE–PubMed (National Library of Medicine, National Institutes of Health), COCHRANE, EMBASE and Google Scholar databases, using as descriptors: “Telogen Effluvium” AND “Hair Loss Disorders” AND “Psychological Impact” OR “Dermatology” OR “Public Health in Brazil” in the last years. **RESULTS AND DISCUSSION** TE is more prevalent in women, especially those experiencing hormonal changes such as pregnancy and menopause. The psychological impact of TE is significant, leading to anxiety, depression, and reduced quality of life. Economic barriers, particularly in Brazil, limit access to effective treatments, exacerbating the condition. Diagnostic challenges arise from the diffuse nature of hair loss and overlap with other conditions, leading to underdiagnosis. Disparities in treatment access are evident across different regions of Brazil, with urban areas offering better care than rural ones. The public health system (SUS) plays a crucial role but is often strained and under-resourced. **CONCLUSION** TE profoundly

affects individuals, particularly women, due to its psychological and social implications. Economic and healthcare disparities in Brazil further complicate its management. Improving the diagnosis, treatment, and overall care for TE patients requires a multidisciplinary approach, enhanced public health policies, and better access to mental health support. Addressing these issues can lead to improved quality of life for those affected by TE.

Keywords: Telogen Effluvium; Hair Loss; Mental Health; Dermatology.

INTRODUCTION

Telogen effluvium (TE) is a form of non-scarring, diffuse hair loss that occurs when a significant number of hair follicles prematurely transition from the anagen (growth) phase to the telogen (resting) phase¹. This condition often results in noticeable thinning of hair and can be triggered by various factors, including physical and emotional stress, hormonal changes, nutritional deficiencies, and systemic illnesses¹. Although TE is typically a self-limiting condition, the visible and often sudden nature of hair loss can cause considerable psychological distress, significantly impacting an individual's quality of life².

The epidemiology of TE reveals that it is particularly prevalent among women, especially those undergoing hormonal changes related to pregnancy, menopause, or the use of oral contraceptives². Additionally, TE is often underdiagnosed due to its subtle clinical presentation and the lack of specific diagnostic criteria, leading to potential misclassification as other forms of alopecia³. In Brazil, economic barriers further complicate the management of TE, as the cost of effective treatments can be prohibitive for many patients who rely on the public health system (Sistema Único de Saúde- SUS) for care³.

The impact of TE on patients extends beyond physical symptoms, affecting psychological

well-being and social interactions. The condition is associated with increased levels of stress, anxiety, and depression, creating a vicious cycle where psychological distress exacerbates hair loss, further diminishing the quality of life⁴. Moreover, societal pressures related to appearance, particularly in cultures that value thick, healthy hair, contribute to the stigmatization of individuals with TE, leading to social isolation and decreased self-esteem⁴. This review aims to explore the epidemiology, psychological impact, economic barriers, and treatment challenges associated with TE, with a particular focus on the Brazilian healthcare context.

OBJETIVES

To explore and review the multifaceted aspects of Telogen Effluvium, focusing on its prevalence, psychological impact, economic barriers, and the challenges in diagnosis and treatment, with particular emphasis on the public health context in Brazil.

SECONDARY OBJETIVES

1. To examine the demographic and hormonal factors contributing to the prevalence of Telogen Effluvium.
2. To assess the psychological effects of hair loss associated with Telogen Effluvium and its impact on patients' quality of life.
3. To analyze the economic and healthcare disparities in accessing treatment for Telogen Effluvium in Brazil.
4. To highlight the diagnostic challenges of Telogen Effluvium and propose strategies for improving diagnostic accuracy.
5. To evaluate the role of Brazil's public health system (SUS) in the management of Telogen Effluvium and suggest potential improvements.

METHODS

This is a narrative review, in which the main aspects of Double Heart-Kidney Transplantation in recent years were analyzed. The beginning of the study was carried out with theoretical training using the following databases: PubMed, sciELO and Medline, using as descriptors: "Telogen Effluvium" AND "Hair Loss Disorders" AND "Psychological Impact" OR "Dermatology" OR "Public Health in Brazil" in the last years. As it is a narrative review, this study does not have any risks.

Databases: This review included studies in the MEDLINE – PubMed (National Library of Medicine, National Institutes of Health), COCHRANE, EMBASE and Google Scholar databases.

The inclusion criteria applied in the analytical review were human intervention studies, experimental studies, cohort studies, case-control studies, cross-sectional studies and literature reviews, editorials, case reports, and poster presentations. Also, only studies writing in English and Portuguese were included.

RESULTS AND DISCUSSION

PREVALENCE AND DEMOGRAPHICS

The prevalence of telogen effluvium (TE) is notably higher among women, particularly those of reproductive age who experience hormonal fluctuations during pregnancy, postpartum periods, and menopause⁵. These hormonal changes are key triggers for TE, highlighting the importance of gender-specific factors in the epidemiology of the condition⁵. In contrast, TE in men is less frequently diagnosed and often associated with acute physical stressors or systemic illnesses rather than hormonal changes⁶. Among older adults, TE is commonly linked to chronic stress and

thyroid dysfunction, complicating the clinical picture and requiring careful differential diagnosis⁶.

PSYCHOLOGICAL IMPACT AND QUALITY OF LIFE

TE has a profound psychological impact on patients, with many reporting significant distress due to the sudden and visible nature of hair loss⁷. The distress is often intensified by societal beauty standards that equate healthy, thick hair with youth and femininity, especially in cultures like Brazil⁷. This leads to decreased self-esteem, anxiety, and depression, particularly when the hair loss is severe or prolonged⁸. The bidirectional relationship between stress and TE exacerbates the condition, as increased anxiety and stress levels can further disrupt the hair growth cycle, creating a challenging cycle to break⁸.

ECONOMIC BARRIERS TO TREATMENT

Economic factors significantly influence the management of TE, especially in Brazil, where financial constraints limit access to healthcare⁹. The public health system (SUS) provides some basic treatment options, but these are often insufficient for managing severe cases of TE, leading patients to seek private care⁹. However, the high cost of private dermatological services and advanced treatments like hair restoration therapies limits their accessibility to the broader population¹⁰. This financial barrier not only delays effective treatment but also contributes to poorer outcomes due to incomplete or inconsistent adherence to prescribed therapies¹⁰.

DIAGNOSTIC CHALLENGES

Diagnosing TE presents several challenges due to its non-specific presentation and overlap with other forms of hair loss, such as androgenic alopecia and alopecia areata¹¹. The diffuse nature of hair shedding in TE, along with the delayed onset of symptoms following a triggering event, complicates clinical recognition¹¹. In Brazil, where access to specialized dermatological services may be limited, there is a significant risk of underdiagnosis or misdiagnosis, leading to inappropriate treatment strategies¹². Improving diagnostic accuracy requires heightened awareness among healthcare providers and the development of more specific diagnostic criteria or tools¹².

DISPARITIES IN TREATMENT ACCESS

Significant disparities exist in the access to and quality of treatment for TE across different regions in Brazil¹³. Urban centers typically offer better access to specialized dermatological care and a broader range of treatment options, including advanced therapies¹³. In contrast, patients in rural or underserved areas often have limited access to healthcare services and may only receive basic or over-the-counter treatments, which are less effective for managing severe TE¹⁴. This regional disparity underscores the need for more equitable healthcare distribution and the expansion of telemedicine services to improve access to care in remote areas¹⁴.

ROLE OF THE PUBLIC HEALTH SYSTEM (SUS)

The Brazilian public health system (SUS) plays a critical role in managing TE, particularly for economically disadvantaged populations¹⁵. Despite the challenges of limited resources and long waiting times, SUS provides essential services, including basic diagnostics and treatment options for TE¹⁵. However, the system's capacity is often strained, and the availability of specialized dermatological care is limited, necessitating improvements in service delivery and resource allocation¹⁶. Strengthening SUS's ability to manage TE is essential for reducing the burden of the condition on the population, ensuring that patients receive timely and effective care regardless of their financial circumstances¹⁶.

CONCLUSION

TE is a prevalent and impactful condition that affects a diverse range of individuals, particularly women experiencing hormonal fluctuations. The psychological toll of TE is significant, as the visible nature of hair loss can lead to profound distress, anxiety, and depression. The cyclical relationship

between stress and TE further complicates its management, necessitating a multidisciplinary approach that addresses both the physical and emotional aspects of the condition.

In Brazil, the economic and healthcare disparities exacerbate the challenges associated with TE management. While the public health system (SUS) provides essential services, its limitations in resources and specialized care often leave many patients without access to effective treatments. This situation is particularly dire for those in rural or underserved areas, where access to dermatological care is scarce.

To improve outcomes for patients with TE, there is a pressing need for increased awareness and education among healthcare providers, better diagnostic tools, and more equitable distribution of healthcare resources across different regions. Expanding access to advanced treatments and integrating mental health support into the care plan are critical steps in addressing the complex needs of TE patients. Public health policies that focus on reducing the financial burden of treatment and improving the overall healthcare infrastructure are also essential in ensuring that all patients have the opportunity to manage TE effectively.

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