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CLINICAL AND DIAGNOSTIC ASPECTS OF DISCOID LUPUS ERYTHEMATOSUS (DLE)

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ABSTRACT

Discoid lupus erythematosus (DLE) is a chronic and limited form of lupus that predominantly affects the skin, characterized by inflammatory lesions that can result in permanent scarring. This article aims to explore the clinical and diagnostic aspects of DLE, identifying the main signs, symptoms, and the most effective methods for its differential diagnosis. The study used a systematic literature review of clinical and dermatological articles, focusing on recent publications that address classification criteria and new diagnostic technologies. Among the methodological procedures adopted, the analysis of specialized medical literature and clinical case studies stands out, in addition to the comparison of different therapeutic approaches. The results indicate that DLE presents typical symptoms, such as erythematous lesions with adherent scales and skin atrophy, and the diagnosis is confirmed through histopathological examinations and the exclusion of other forms of lupus. The research concludes that early diagnosis and proper management are essential to avoid serious complications, such as scarring and permanent disfigurement, and that new diagnostic tools, such as dermoscopy and directed biopsy, have improved diagnostic accuracy.

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INTRODUCTION

This study addresses Discoid Lupus Erythematosus (DLE), a chronic autoimmune condition that predominantly affects the skin, resulting in inflammatory lesions that can cause permanent scarring and disfigurement. DLE is one of the most common cutaneous manifestations of lupus and, due to its recurrent and potentially debilitating nature, deserves an in-depth analysis of its clinical and diagnostic aspects.

The justification for this research lies in the relevance of expanding knowledge about early diagnosis and therapeutic options for DLE, since its clinical manifestations can significantly impact the quality of life of patients. Detailed understanding of clinical factors, combined with the use of advanced diagnostic methods, can improve prognoses and reduce the psychological and social effects of the disease.

The aim of this study is to examine the clinical and diagnostic aspects of DLE, focusing on new therapeutic approaches and more accurate techniques for identifying the condition. The research also seeks to contribute to medical practice, providing information that helps in the more effective management of the disease.

The work is structured in sections that initially present an overview of the disease, followed by the most effective diagnostic methods, current therapeutic approaches, and concludes with considerations on future challenges and possible paths to improve treatments and patient well-being.

In the first section, the study addresses the clinical aspects of DLE, exploration of the signs, symptoms and diagnostic criteria for DLE, comparison between DLE and other forms of lupus, detailing the typical characteristics of skin lesions, which usually manifest in areas exposed to the sun, such as the face, ears and scalp. These lesions can progress from red rashes to thick, scaly plaques, often leading to scarring. In addition, associated symptoms such as pain and tenderness in the affected areas are discussed, as well as the prevalence of the disease in different population groups, with emphasis on the higher incidence in women.

The second section focuses on the diagnostic methods, treatment, and psychosocial impact of Discoid Lupus Erythematosus, exploring both conventional techniques, such as skin biopsy, and recent technological advances that aid in the early detection of DLE. Laboratory tests, including antinuclear antibody (ANA) levels, and the use of imaging technologies to assess the extent of the lesions are analyzed. The section also discusses the importance of differential diagnosis, considering the similarity of DLE symptoms to other dermatological conditions, which can make it difficult to accurately identify the disease at early stages.

METHODOLOGY

Regarding the methodological approach, this study is based on a systematic review of the recent literature on LED, with analysis of scientific articles, case studies and current clinical guidelines. The analysis is based on qualitative and quantitative data extracted from research published in the last five years.

The theoretical-conceptual approach is centered on dermatology and immunology, addressing the understanding of the pathological mechanisms of DLE, as well as the technological advances that help in clinical diagnosis. The discussions are based on the interactions between immunological factors and their cutaneous manifestations.

CLINICAL ASPECTS AND DIAGNOSTIC CRITERIA OF DISCOID LUPUS ERYTHEMATOSUS

Discoid Lupus Erythematosus manifests predominantly with skin lesions, being a form of chronic cutaneous lupus erythematosus, commonly located in areas exposed to sunlight, such as the face and ears. The lesions are characterized by erythematous and scaly plaques that can develop into scars, resulting in atrophy and hyperpigmentation. The differential diagnosis of DLE is challenging due to its similarity to other dermatological diseases. According to Berbert and Mantese (2005), the clinical presentation of DLE is quite variable, which requires a thorough analysis to avoid diagnostic errors. In the context of autoimmune diseases, DLE stands out for its chronicity and for the complications that can arise as a result of skin healing.

Regarding the diagnostic criteria, the clinical examination is the starting point for the identification of the DLE. Patients have typical skin lesions, which, when exposed to ultraviolet light, can worsen. The histopathological features of these lesions are specific, including hyperkeratosis, epidermal atrophy, and lymphocytic inflammatory infiltrate in the dermis. Studies show that the presence of these elements, combined with the clinical picture, are sufficient to confirm the diagnosis of DLE in many cases (De Santana Leal et al., 2021). However, there are situations in which the differential diagnosis with other conditions, such as seborrheic dermatitis and psoriasis, is necessary, highlighting the importance of skin biopsy for detailed histological analysis.

To deepen the diagnosis, complementary tests, such as confocal microscopy, are promising methods in the study of DLE lesions. Marco et al. (2007) explored the efficacy of this technique, which allows in vivo evaluation of the skin at the cellular level, helping to differentiate the LED from other dermatoses. This non-invasive method is valuable for monitoring lesions over time, reducing the need for repeat biopsies. In addition, serological

tests, such as antinuclear antibody (ANA) testing, are used as diagnostic support, although DLE usually has negative results or low ANA titers compared to systemic lupus erythematosus (Vargas & Romano, 2009). This reinforces the idea that the diagnosis of DLE depends more on clinical and histological observation than on laboratory tests.

COMPARISON BETWEEN LED AND OTHER LUPUS PRESENTATIONS

Discoid Lupus Erythematosus (DLE) and Systemic Lupus Erythematosus (SLE) share some clinical features, but have significant distinctions in terms of manifestation and severity. DLE is predominantly limited to the skin, causing well-defined skin lesions, while SLE affects multiple organs and systems (Berbert; Mantese, 2005). In its classic form, DLE manifests with erythematous eruptions, areas of atrophy, peripheral hyperpigmentation, and central depigmentation (De Santana Leal et al., 2021). SLE, on the other hand, is marked by systemic symptoms, such as arthritis, nephropathy, and hematological involvement, in addition to cutaneous characteristics, which, in some cases, overlap with DLE (Bortolini; Pereira, 2020).

Photosensitivity is a common feature in both forms of lupus, although it presents more intensely in patients with DLE. Studies have shown that exposure to ultraviolet light triggers skin lesions in individuals with lupus, with greater frequency and severity in DLE (H., van Weelden et al., 1988). This phenomenon can be explained by the exacerbated response of the immune system to the damage caused by UV rays, leading to inflammation and tissue destruction (Rudolf; Baer; Harber, 1965). In SLE, photosensitivity can trigger not only skin lesions, but also worsen systemic symptoms, evidencing the multifaceted nature of the disease (Vargas; Romano, 2009).

In addition to the clinical differences, the diagnosis of DLE and SLE also has particularities. The diagnosis of DLE is mostly clinical, based on the observation of skin lesions and histopathological examinations that confirm the presence of specific inflammatory changes in the dermis and epidermis (Marco et al., 2007). On the other hand, the diagnosis of SLE requires a broader evaluation, including serological and immunological tests that detect the presence of autoantibodies, such as anti-DNA and antinuclear antibody (BortolinI; Pereira, 2020). The coexistence of DLE and SLE in the same patient is not uncommon, which can make it difficult to distinguish the diagnosis and require multidisciplinary follow-up (Berbert; Mantese, 2005).

The treatment for LED and SLE also presents considerable variations. DLE, being a predominantly cutaneous disease, responds well to topical and systemic treatments with anti-inflammatory drugs and mild immunosuppressants, such as chloroquine (Bezerra,

2007). SLE, on the other hand, due to its systemic character, requires a more aggressive therapeutic approach, often involving corticosteroids and high-potency immunosuppressants to control multisystem involvement (Dos Santos et al., 2023). Individualization of treatment is essential for both types of lupus, given the spectrum of severity and varied therapeutic response.

Finally, the comparison between DLE and SLE highlights the complexity of lupus as a whole, an autoimmune disease that can manifest itself in mild to severe forms, depending on the subtype. While SLE can be relatively controlled with dermatological interventions, SLE represents a greater clinical challenge, requiring continuous monitoring and multidisciplinary interventions (Camille; Barete; Piette, 2008). Understanding these differences is critical for effective disease management and improving the quality of life of affected patients.

TREATMENT AND MANAGEMENT OF DISCOID LUPUS ERYTHEMATOSUS

The treatment of Discoid Lupus Erythematosus (DLE) has evolved significantly over the years, with several studies focusing on therapeutic interventions both for the management of the disease and for the improvement of patients' quality of life. Historically, treatments were based on antimalarial agents such as chloroquine, as described by Goldman et al. (1953), who highlighted their effectiveness in controlling skin lesions. This drug, widely used in the management of autoimmune diseases, continues to be one of the first lines of treatment for patients with DLE, due to its relatively favorable safety profile and its ability to reduce inflammation and injury.

In addition to antimalarials, the evolution in the management of DLE includes the use of immunosuppressants and topical corticosteroids, which have shown efficacy in reducing inflammation and controlling the most severe cutaneous symptoms (Tassinari et al., 2023). More recent clinical studies, such as the one by Furlan et al. (2018), indicate that the addition of topical or systemic corticosteroids to the therapeutic regimen can provide a faster clinical response, especially in patients with extensive and difficult-to-manage skin lesions. However, long-term use of these drugs should be monitored because of the risk of adverse effects, including the development of resistance and skin atrophy.

In recent years, advances in the field of Clinical Dermatology have allowed the introduction of new therapies for the treatment of DLE. Photoprotection, for example, has become a crucial preventive measure to minimize the exacerbation of lesions, given that exposure to ultraviolet light is a known triggering factor (van Weelden et al., 1988). In addition, innovative therapies such as topical calcineurin inhibitors have emerged as

promising alternatives for patients who do not respond well to conventional corticosteroid treatment (Paolo et al., 2002). These inhibitors have demonstrated efficacy in reducing inflammation without the side effects associated with corticosteroid use, thus offering a new therapeutic perspective for DLE management.

While topical and systemic treatments continue to be pillars of DLE management, there is an increasing emphasis on individualized treatment, with the choice of therapy being based on the severity of the disease, location of lesions, and patient response to medications (Correia et al., 2024). The use of combined therapeutic approaches, such as treatment with chloroquine associated with immunomodulators, has been shown to be effective in more refractory cases, allowing a broader control of the disease. According to Jacob et al. (1989), multidisciplinary management, involving dermatologists, rheumatologists and specialists in autoimmune diseases, can significantly improve the prognosis of patients with DLE.

In terms of new therapeutic perspectives, research on the use of herbal medicines has also gained attention. Recent studies suggest that some natural substances may act as adjuvants in the treatment of autoimmune diseases, including LED (Dos Santos et al., 2023). Although more studies are needed to validate their effectiveness, herbal medicines represent a promising area of research, offering the possibility of less aggressive complementary treatments. Thus, the management of DLE continues to evolve with the introduction of new therapies and combined approaches, always with the aim of improving the quality of life of patients and controlling the progression of the disease.

PSYCHOSOCIAL IMPACT OF DISCOID LUPUS ERYTHEMATOSUS

In addition to the evident physical symptoms of DLE, the psychosocial impact of this disease is significant, mainly due to the aesthetic changes and functional limitations imposed by the progression of the clinical picture. The social stigma associated with visible skin manifestations can lead to social isolation, loss of self-esteem, and increased levels of anxiety and depression (Nery; Borba; Lotufo Neto, 2004). LED mainly affects young women, which aggravates the emotional impact, as this age group is highly sensitive to body image and social acceptance (Cavicchia et al., 2013). Thus, the recognition of the psychosocial factors related to the disease is essential for the complete management of the patient.

The emotional aspect of patients with DLE is a dimension that is often neglected in clinical treatment, but of great relevance, since the compromised appearance can directly affect the quality of life and psychological well-being. Souza et al. (2021) highlight that the

perception of quality of life in patients with lupus, including DLE, is closely linked to the ability to manage the manifestations of the disease and to adaptation to physical restrictions. Chronic pain, itching, and visible injuries become ongoing stressors, exacerbating feelings of frustration and powerlessness. According to Da Silva and Leijoto (2014), many patients report feeling a disconnect between the person they were before the diagnosis and who they became after the development of the disease, which reinforces the need for broader psychosocial interventions beyond clinical management.

Dermatology is one of the medical areas most affected by the manifestations of LED, and this has a direct impact on the way patients perceive their own identities. Caruso et al. (2024) point out that the cutaneous manifestations of DLE present challenges not only for diagnosis, but also for psychological management. This is because the involvement of the skin, the largest organ in the body, makes LED a "visible" disease, which raises levels of social anxiety. Appropriate clinical management should therefore include psychological support, which can be delivered through cognitive behavioral therapy (CBT) and support groups that help patients cope with the emotional and social challenges posed by the disease (Lago, 2019).

The impact of LED on patients' self-esteem cannot be underestimated. Often, the scars resulting from skin lesions are permanent, which contributes to a decrease in self-confidence and a feeling of inadequacy (Da Silva; Leijoto, 2014). In this context, society, as well as health professionals, must be aware of the psychosocial challenges faced by patients in order to offer more humane and complete care. Multidisciplinary interventions, including psychological and psychiatric support, are essential to improve the quality of life of these individuals (Nery; Borba; Lotufo Neto, 2004). In addition, educating the population about chronic skin conditions can reduce social stigma and improve the inclusion of LED patients in their communities.

CONCLUSION

Considerations about Discoid Lupus Erythematosus (DLE) highlight the complexity of this condition, which requires a multidisciplinary approach focused not only on clinical management, but also on the psychosocial impacts that accompany the disease. The challenges faced by patients with DLE go beyond skin lesions, encompassing emotional and social issues that affect quality of life. Thus, the integration of mental health professionals, such as psychologists and psychiatrists, in the treatment of these patients is an important possibility to be explored. Interventions such as cognitive behavioral therapy (CBT) and support groups can contribute to improved psychological well-being, helping

individuals cope with the impact of the disease on their self-esteem and social relationships (Cavicchia et al., 2013). At the same time, it is essential that health professionals are trained to identify the signs of emotional and psychological distress in these patients, integrating holistic care with clinical treatment.

Among the most evident challenges in the treatment of DLE is the difficulty of early diagnosis and effective management of skin lesions, which often become chronic and leave permanent scars. The identification of new clinical and laboratory markers, as well as the development of technologies for diagnostic imaging, may be a promising area for future research (Caruso et al., 2024). In addition, the use of more effective topical therapies, combined with systemic medications, should continue to be investigated to improve clinical outcomes. Immunosuppressive therapy, for example, has potential benefits in controlling the progression of the disease, but its side effects need to be constantly monitored (Nery; Borba; Lotufo Neto, 2004). In this sense, new studies on less invasive treatments with less toxicity are needed, aiming to reduce collateral damage and increase the quality of life of patients.

Another crucial aspect refers to the psychosocial impact of the disease. Despite advances in the clinical treatment of DLE, understanding of the social and emotional effects is still limited. Future research may focus on the analysis of quality of life indicators in patients with DLE, considering variables such as gender, age group, and socioeconomic context. The stigma associated with skin lesions, in particular, needs greater attention, as it directly affects individuals' self-esteem and social interactions. Da Silva and Leijoto (2014) point out that many patients report feelings of social exclusion and discomfort with their own image, evidencing the need for coping strategies that encompass both physical and mental health. In this context, the development of educational programs aimed at raising awareness about chronic skin diseases can contribute to reducing prejudice and creating more inclusive environments.

Advances in dermatological and immunological science will certainly open new avenues for the treatment and diagnosis of DLE, but the focus must also extend to the human aspect of the disease. The treatment of patients with DLE should be holistic, considering not only the clinical evolution, but also the psychosocial and emotional impacts. Interventions that address the relationship between body image and self-esteem, for example, may be beneficial, especially for young patients, who often face significant emotional challenges related to the visible manifestations of the disease. Longitudinal studies investigating the efficacy of psychosocial interventions and their impact on quality of life over time can be an important contribution to the literature on DLE.

Finally, Discoid Lupus Erythematosus presents challenges that go beyond the clinical scope, requiring an integrated and multidisciplinary approach. The future of research into this condition must prioritize not only advances in diagnosis and treatment, but also understanding the psychosocial impact of the disease. The development of new therapies, associated with effective psychosocial interventions, can offer patients a higher quality of life and emotional well-being. Therefore, researchers, healthcare professionals, and policymakers must work together to create care strategies that take into account all dimensions of the lives of patients with LED, providing more humane and inclusive care.

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