CASE REPORT

Confluence of Pica Syndrome, Discoid Lupus Erythematosus, and Anaemia in a Singular Patient: A Comprehensive Exploration

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ABSTRACT

This case report presents a middle-aged woman with a complex clinical picture involving Pica syndrome, Discoid Lupus Erythematosus (DLE), and anaemia. She exhibited a compulsion to consume non-nutritive substances such as bricks and sand, a progressively pigmented lesion over the nose, and fatigue. Despite initial diagnostic challenges, comprehensive clinical evaluations led to an accurate diagnosis and effective management. This study highlights the importance of multidisciplinary approaches in diagnosing and treating multifaceted medical conditions.

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Keywords: Pica syndrome, Discoid Lupus Erythematosus, anaemia, interdisciplinary care, psychiatric evaluation

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INTRODUCTION

This case report delves into the intricate medical presentation of a middle-aged woman in her 40s, who presented with a constellation of symptoms including Pica syndrome, Discoid Lupus Erythematosus (DLE), and anaemia. Pica syndrome, characterized by the compulsive ingestion of non-nutritive substances, is a condition often associated with nutritional deficiencies, psychiatric comorbidities, and cultural practices (1). In the context of this case, the patient's history of consuming substances like bricks and sand underscores the complexity of her medical condition and raises questions about underlying psychological stressors and nutritional imbalances.

The emergence of a progressively pigmented lesion over the nose adds another layer of complexity to the clinical picture, pointing towards the possibility of an underlying dermatological condition such as Discoid Lupus Erythematosus (DLE). DLE is a chronic autoimmune skin disorder characterized by the development of coin-shaped lesions, photosensitivity, and scarring, primarily affecting sun-exposed areas of the body. The interplay between autoimmune disorders like DLE and psychological stressors is well-documented, with stress often exacerbating the severity of cutaneous manifestations.

Furthermore, the presence of anaemia in this patient raises concerns about potential underlying aetiologies, including nutritional deficiencies, chronic disease processes, or autoimmune-mediated haemolytic disorders (2). Anaemia, characterized by a reduction in red blood cell count or haemoglobin levels, can contribute to symptoms of fatigue, weakness, and pallor, further complicating the clinical presentation of the patient.

This report aims to provide a comprehensive clinical review of the patient's presentation, investigations, diagnosis, and pharmacotherapy, shedding light on the challenges faced in managing complex medical conditions with overlapping clinical features. By unravelling the intricacies of this case, we hope to contribute to a deeper understanding of the interconnectedness between psychological, immunological, and physiological factors in shaping the clinical course of patients with multifaceted medical conditions.

CASE REPORT

A woman in her 40s from a low socioeconomic background presented with Pica syndrome, DLE, and anaemia. Her Pica behaviour involved consuming raw rice, bricks, and sand over two years. Additionally, she had a progressively pigmented lesion on her nose, well-defined, round to oval shaped plaques with an adherent scale or crust, the centre of lesion often appears atrophic, surrounded by an elevated, erythematous border - suggestive of DLE and a haemoglobin level of 7.6 g/dL indicating anaemia. Managing these conditions posed significant challenges, requiring a multidisciplinary approach to optimize outcomes.

A psychiatric assessment evaluated the nature and severity of her Pica behaviour, revealing that her compulsion to consume non-nutritive substances stemmed from psychological stress and nutritional deficiencies (4). She had repetitive thoughts of consuming such substances which was difficult to resist leading to the behavioural pattern. Dermatological evaluation of the pigmented lesion over her nose- inflamed and coin-shaped hyperpigmented patches of skin with a scaly and crusty appearance and erythematous border indicated a typical presentation of DLE. Laboratory tests confirmed anaemia with a haemoglobin level of 7.6 g/dL. Autoimmune markers and histopathological examination confirmed the DLE diagnosis. Histopathological examination shows epidermal atrophy, hydropic degeneration of basal layer, pigment incontinence, mild perivascular inflammatory cell infiltrates Fig. 2.

The differential diagnosis considered included iron-deficiency anaemia, systemic lupus erythematosus (SLE), autoimmune haemolytic anaemia (AIHA) (2), and other dermatological conditions like psoriasis and contact dermatitis. However, these were ruled out based on clinical presentation, laboratory results, and histopathological findings.

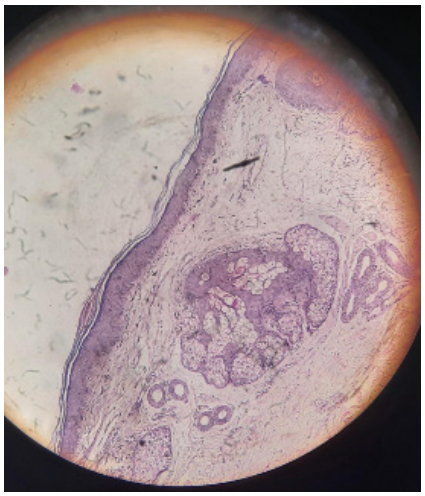

Fig. 1: Shows a well-defined, round to oval shaped plaques with an adherent scale or crust. The centre of lesion often appears atrophic, surrounded by an elevated, erythematous border

Fig. 2: Histopathological examination shows Epidermal atrophy, hydropic degeneration of basal layer, pigment incontinence, mild perivascular inflammatory cell infiltrates

The treatment plan included:
Pica Syndrome:
Fluoxetine (20 mg daily) and Olanzapine (5 mg nightly) to manage compulsive behaviours and cravings.

Discoid Lupus Erythematosus (DLE):
Topical corticosteroid for inflammation, sunscreen gel for UV protection, and Hydroxychloroquine (200 mg daily) as an immunomodulatory medication (5).

Anaemia:
Iron supplementation with ferrous sulfate (200mg/day) and vitamins to support haemoglobin production.

The patient is under regular follow-up to monitor treatment effectiveness. Early observations suggest improvements in symptoms, reduction in Pica behaviour, regression of the pigmented lesion, and correction of anaemia. Long-term monitoring and potential treatment adjustments are necessary to optimize outcomes.

DISCUSSION

The convergence of Pica syndrome, Discoid Lupus Erythematosus (DLE), and anaemia in a single patient presents a unique clinical challenge, underscoring the need for a holistic approach to patient care. Each condition influences the others, creating a complex interplay that complicates diagnosis and management.

Pica Syndrome: Traditionally viewed as a psychiatric disorder, Pica involves the ingestion of non-nutritive substances, which can lead to severe nutritional deficiencies and gastrointestinal complications (1). In this case, the patient's consumption of non-food items likely contributed to her anaemia, compounding her fatigue and overall health deterioration. The psychiatric evaluation and subsequent treatment with Fluoxetine and Olanzapine were crucial in managing her compulsive behaviours. However, addressing the underlying nutritional deficiencies and ensuring proper dietary intake were equally important in her treatment plan.

Discoid Lupus Erythematosus (DLE): An autoimmune condition, DLE primarily affects sun-exposed areas of the skin, leading to scarring and photosensitivity.

The patient's progressively pigmented lesion on her nose, confirmed by histopathological examination, indicated DLE. This autoimmune disorder's intersection with psychological stressors, such as those seen in Pica, suggests a bidirectional relationship where stress can exacerbate autoimmune symptoms and vice versa (3,4). Topical corticosteroids, sunscreen, and Hydroxychloroquine were effective in managing her DLE symptoms, highlighting the importance of a tailored treatment approach (5).

Anaemia: The patient's anaemia, with a haemoglobin level of 7.6 g/dL, was initially suspected to be iron-deficiency anaemia. However, further evaluations revealed that her anaemia was likely multifactorial, influenced by her nutritional deficiencies from Pica and the autoimmune nature of DLE. Iron supplementation and a focus on improving her nutritional status were essential components of her treatment plan.

Interdisciplinary Approach: This case underscores the importance of an interdisciplinary approach to patient care. The collaboration between psychiatric, dermatological, and haematological specialists ensured a comprehensive evaluation and treatment plan that addressed all aspects of the patient's health. Regular follow-ups and ongoing assessments were vital in monitoring her progress and adjusting treatments as needed.

Implications for Practice: This case highlights the need for healthcare providers to consider the interconnectedness of psychological, immunological, and physiological factors in managing complex medical conditions. A holistic, patient-centred approach is crucial in delivering effective care and improving patient outcomes. Further research into the interactions between these conditions could provide deeper insights into their management and lead to more effective treatment strategies.

The case report is well-aligned with recent references, accurately reflecting the current understanding and management strategies for Pica syndrome, DLE, and anaemia. The study's emphasis on an interdisciplinary approach, the recognition of stress as a factor in autoimmune disease, and the integration of both psychiatric and nutritional interventions are all consistent with the latest research. However, the report could benefit from a deeper exploration of the underlying mechanisms linking these conditions, as recent studies continue to uncover the complex interplay between psychological, nutritional, and autoimmune factors.

CONCLUSION

Effective management of complex cases involving multiple interrelated conditions requires a multidisciplinary approach. This patient's case highlights the necessity for integrated care strategies that encompass psychiatric, dermatological, and haematological evaluations. Comprehensive and ongoing assessments, combined with tailored treatment plans, can significantly improve patient outcomes in such multifaceted medical scenarios. Recognizing the interconnectedness of psychological, immunological, and physiological factors is crucial for guiding effective treatment strategies and improving patient care.

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