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Atypical Presentation of Lupus in a Pediatric Patient

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Introduction

Systemic Lupus Erythematosus (SLE) is a chronic autoimmune disease with variable manifestations that most commonly affects women of reproductive age. However, pediatric lupus, though rarer, tends to be more aggressive and presents unique diagnostic challenges. The classic triad of fever, joint pain and rash may be absent or subtle, leading to misdiagnosis or delayed treatment. Pediatric patients often present with more systemic involvement and higher disease activity at onset. The variability of symptoms in children necessitates a high index of suspicion, particularly when faced with unexplained systemic complaints. Recognition of atypical manifestations is essential for timely intervention to prevent irreversible organ damage. Pediatric SLE should always be considered in the differential diagnosis of children with multi-organ symptoms and positive autoimmune markers, even when the clinical presentation is not typical of the adult form of the disease. Moreover, this case illustrates the critical role of early renal assessment in pediatric patients presenting with subtle signs of systemic illness. The presence of proteinuria and hypertension, although initially overshadowed by nonspecific symptoms like fatigue and fever, were key indicators of underlying renal pathology [1].

Description

The diagnosis of Systemic Lupus Erythematosus (SLE) in pediatric patients is particularly challenging due to its highly variable and often atypical presentations. Unlike adults, children with SLE frequently present without the hallmark dermatologic or musculoskeletal symptoms such as malar rash or arthritis. Instead, pediatric SLE (pSLE) may initially manifest as isolated hematologic abnormalities, nephritis, or systemic symptoms like fatigue, fever and anemia—symptoms commonly misattributed to viral illnesses or other benign conditions. pSLE is associated with a higher incidence of severe organ involvement, including renal, hematologic and central nervous system complications. Among these, lupus nephritis is one of the most common and serious initial manifestations in children, often occurring in the absence of classic SLE features. This necessitates a high index of suspicion and a comprehensive diagnostic approach. Laboratory findings such as anemia, elevated inflammatory markers, proteinuria, hypocomplementemia and positive autoantibodies (ANA, anti-dsDNA) are crucial for diagnosis. Renal biopsy remains indispensable for confirming lupus nephritis and determining its class, which directly informs treatment intensity and prognosis [2].

Prompt initiation of immunosuppressive therapy typically involving corticosteroids and disease-modifying agents such as mycophenolate mofetil and hydroxychloroquine can preserve renal function and improve long-term outcomes. However, treatment must be carefully monitored for side effects, particularly growth suppression, infections and organ toxicity. Regular follow-up and adjustment of therapy are essential to ensure disease control while minimizing harm. Beyond the physical manifestations, the psychosocial burden of pSLE can be significant. Chronic illness, prolonged diagnostic processes and the need for ongoing treatment can lead to anxiety, depression and social withdrawal in pediatric patients. Thus, a multidisciplinary care model that includes pediatric rheumatologists, nephrologists, mental health professionals and educational support systems is critical to comprehensive care. Improving outcomes in pediatric SLE will require advances in several key areas. First, there is a pressing need for the development of pediatric-specific diagnostic criteria and early screening protocols that account for atypical or incomplete presentations. Incorporating machine learning algorithms and biomarkers into clinical workflows may help identify high-risk patients earlier and more accurately [3].

Second, research into non-invasive biomarkers for lupus nephritis activity such as urinary cytokines, exosomal RNA and novel imaging modalities holds promise for reducing the reliance on renal biopsies for disease monitoring. These tools could offer real-time assessment of disease activity, allowing for more dynamic and individualized treatment approaches. The therapeutic landscape is also evolving. Targeted biologic agents, including B-cell and interferon pathway inhibitors, are under investigation and may offer improved efficacy and safety over traditional immunosuppressants. Pediatric trials of these agents are essential to establish their role in first-line or refractory disease management. In addition, emphasis must be placed on long-term disease monitoring, particularly the transition from pediatric to adult care. Structured transition programs can improve medication adherence, reduce flare rates and support psychosocial adjustment during adolescence. Finally, broader efforts in public and professional education are needed to increase awareness of pediatric autoimmune diseases. Empowering primary care providers to recognize early warning signs and supporting families with educational resources, can lead to timelier diagnosis and intervention [4].

In the future, such discoveries may enable the stratification of patients based on genetic risk profiles, facilitating early diagnosis in asymptomatic individuals with a family history of autoimmune disease. Additionally, identifying gene-environment interactions could offer insights into disease triggers, supporting preventive strategies and early interventions in susceptible populations. Another critical area of focus is improving medication adherence and long-term disease management. Adolescents with chronic illnesses like SLE often struggle with adherence due to medication fatigue, denial, or concerns about side effects. Mobile health technologies, such as apps for medication tracking, symptom monitoring and virtual consultations, have the potential to enhance engagement and empower patients to take an active role in their care. Furthermore, personalized education programs and peer support networks can foster better understanding and coping skills among young patients, ultimately improving adherence and clinical outcomes. Global disparities in access to

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pediatric rheumatology care remain a major barrier to timely diagnosis and effective treatment of SLE in many regions. Strengthening health systems through workforce training, telemedicine platforms and international collaboration can bridge gaps in expertise and care delivery. Additionally, investment in population-based registries and longitudinal studies will provide essential data on disease patterns, treatment responses and long-term outcomes in diverse pediatric populations [5].

Conclusion

Systemic lupus erythematosus in children may present atypically, delaying diagnosis and increasing the risk of long-term complications. This case highlights that pediatric lupus can initially manifest as isolated renal or hematologic involvement without classic systemic features. Clinicians must maintain a broad differential when encountering unexplained systemic symptoms in children, especially when basic investigations suggest immune-mediated pathology. Early diagnosis and prompt initiation of immunosuppressive therapy are critical to improving outcomes. Multidisciplinary care involving rheumatology, nephrology and primary care is vital for managing pediatric SLE and optimizing long-term quality of life.

Acknowledgment

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Conflict of Interest

None.

References

1. Rojas-Serrano, J., J. Pedroza, J. Regalado and J. Robledo, et al. "High prevalence of infections in patients with systemic lupus erythematosus and pulmonary haemorrhage." *Lupus* 17 (2008): 295-299.

2. Tominaga, A., S. Tajima, A. Ishibashi and K. Kimata. "Reticular erythematous mucinosis syndrome with an infiltration of factor XIIIa+ and hyaluronan synthase 2+ dermal dendrocytes." *Br J Dermatol* 145 (2001): 141-145.

3. Baroiu, Liliana, Ana Cristina Lese, Ioana Anca Stefanopol and Alina Iancu, et al. "The role of D-Dimers in the initial evaluation of COVID-19." *Ther Clin Risk Manag* (2022): 323-335.

4. Bundhun, Pravesh Kumar, Alka Kumari and Feng Huang. "Differences in clinical features observed between childhood-onset versus adult-onset systemic lupus erythematosus: A systematic review and meta-analysis." *Medicine* 96 (2017): e8086.

5. Majumder, Parimal, Joshua T. Lee Andrew R. Rahmberg and Gaurav Kumar, et al. "A super enhancer controls expression and chromatin architecture within the MHC class II locus." *J Exp Med* 217 (2019): e20190668.

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