ISSN: 2663-5798 || Arab Journal for Scientific Publishing

الإصدار السابع – العدد اثنان وسبعون
تاريخ الإصدار: 2 – أكتوبر – 2024م

www.ajsp.net

"Systemic Lupus Erythematosus, an Unusual Presentation: A Case Report in Azal Hospital, Sana'a, Yemen"

Researcher:

Adnan Al-Adhal, Amr Al-Adhal, Abdullah Al-Adhal

Adnan Al-Adhal, Ph.D., Professor of Pharmacology and Therapeutics, Sana'a University, Yemen, Internal medicine specialist, rheumatology and autoimmune diseases, Azal Hospital, Sana'a, Yemen.

Amr Al-Adhal, Ophthalmology specialist, Kuwait Hospital, Sana'a, Yemen.

Abdullah Al-Adhal, Radiology specialist, Kuwait Hospital, Sana'a, Yemen.

https://doi.org/10.36571/ajsp723

ISSN: 2663-5798 || Arab Journal for Scientific Publishing

الإصدار السابع – العدد اثنان وسبعون
تاريخ الإصدار: 2 – أكتوبر – 2024م

www.ajsp.net

Abstract:
Systemic lupus erythematosus (SLE) is a chronic autoimmune disorder characterized by various clinical presentations and potential involvement of multiple organ systems; it exhibits a significant female predominance, with a peak incidence of middle-aged individuals.
In this article, we report a case of a 19 years old female patient who presented with fever, headache, fatigue and neck stiffness. Initial investigations revealed a normal white blood cell count (WBC) with neutrophilia, leading to a diagnosis of bacterial meningitis. The patient responded to antibiotic and analgesic treatment. However, subsequent development of arthritis and skin lesions raised suspicion of systemic lupus erythematosus, which was confirmed by positive anti-dsDNA and antinuclear antibody (ANA) tests.

Keywords: Systemic lupus erythematosus, SLE, meningitis.

Conflict of interest statement
The authors declare no conflict of interest.

Introduction

Systemic lupus erythematosus (SLE) is a chronic autoimmune condition characterized by a wide range of clinical manifestations and a course marked by periods of exacerbation and remission (**1**). SLE arises from dysregulated immune activity, leading to clinical symptoms. It exhibits a higher prevalence among African American women and women from other ethnic minority groups (**2**). The condition is characterized by the production of autoantibodies targeting endogenous antigens, with diagnosis relying on both clinical assessments and laboratory tests. Management strategies include sun protection, nutritional support, smoking cessation, and regular exercise. Pharmacological interventions include a range of medications, such as steroidal and nonsteroidal anti-inflammatory drugs, immunosuppressants, and biologics (**3**). Fatigue, a common complaint among SLE patients, poses challenges in treatment (**4**), impacting the quality of life and psychological well-being of patients and their relatives **(5)**. SLE can manifest in rare clinical presentations, including lupus hepatitis, interstitial lung disease, myocarditis, pulmonary hypertension, lupus retinopathy, aseptic meningitis, and chorea (**6**). These findings underscore the importance of increased awareness in diagnosing SLE.

Case presentation

19-year-old female presented to the internal medicine clinic of our hospital complaining of fever, headache, fatigue, vertigo, blurred vision, and neck stiffness. These symptoms had started two days prior. She had no known medical history. Physical examination revealed tachycardia at 141 beats per minute, high-grade fever of 40°C, and hypotension of 70/40 mmHg. Complete blood count (CBC) showed normal white blood cell count (WBC) of 5.54 x 10^9/L with neutrophilia of 77.1%. Hemoglobin was 10.6 g/dL, and platelets were normal. C-reactive protein (CRP) was elevated at 27.5 mg/L. The patient's relatives refused hospital admission and cerebrospinal fluid (CSF) analysis. A diagnosis of bacterial meningitis was made. The patient was initiated on intravenous vancomycin 1 gram every 12 hours, cefepime 1 gram every 12 hours, paracetamol 1 gram every 12 hours, dexamethasone 8 mg every 12 hours, and dextrose/normal saline 500 cc every 12 hours. After three days, the patient's clinical condition improved significantly, as did the CRP level. However, one week later, the patient developed arthritis and skin lesions, raising suspicion of an autoimmune connective tissue disease. Further evaluation revealed oral ulcers and persistent fatigue. The diagnosis of systemic lupus erythematosus (SLE) was confirmed by positive anti-dsDNA and antinuclear antibody (ANA) tests. Given the severity of arthritis, fatigue, and oral ulcers, a flare of SLE was suspected. The patient received pulse therapy with intravenous methylprednisolone 500 mg once daily for three days, administered in dextrose/normal saline 500 cc, along with cefuroxime 750 mg, pantoprazole 40 mg, and ondansetron 4 mg. Subsequently, oral azathioprine 2 mg/kg/day was initiated. Both arthritis and fatigue improved, leading to overall clinical improvement.

Discussion

Because SLE primarily affects the rheumatologically system, it is unsurprising that arthritis is the most prevalent presentation **(7, 8)**, and it is even more common in children (**9**) However, in our case meningitis was the main clinical presentation, which is a rare presentation in SLE. The new in our case is that meningitis was septic. Meningitis is a medical emergency which prompted us to use empirical strong antibiotics; cefepime a broad-spectrum fourth generation cephalosporin which cover streptococci, meningococci and Haemophilus influenzae, the common cases of bacterial meningitis (**10**). Vancomycin is also used to cover methicillin-resistant staphylococcus aureus (MRSA) (**11**). Dexamethasone was also added to prevent neurological complications (**12**). After one week of treatment the patient presented with arthritis and skin lesions which are very common in SLE (**13**). Whereas our case is a young female patient these new symptoms raised the suspicious of autoimmune connective tissue disease (**14**). Further examination of the patient showed oral ulcer and persistent fatigability which are also symptoms of SLE (**15**). So we asked for ds-DNA and ANA immune markers which showed positive results. Therefore, the diagnosis of SLE was made. The severity of arthritis, oral ulcer and fatigability support the flare of SLE, which necessitate the introduction of pulse therapy of methylprednisolone 500 mg 1*1*3 (**16**). To maintain a good prognosis, the patient is kept on azathioprine 2 mg/kg/day. Of course the patient is asked to visit our clinic once monthly for follow up.

Conclusion

Systemic lupus erythematosus (SLE) is a serious autoimmune connective tissue disease that requires early diagnosis for optimal outcomes. A high index of suspicion should be maintained to identify new cases, particularly among young women. Severe and atypical presentations, such as those mimicking meningitis, necessitate prompt intervention. Chronic, stable SLE cases can often be managed with conservative therapies.

Human Ethics

Consent was obtained from our patient in this study.

References:

Dina Zucchi [1], Ettore Silvagni [2], Elena Elefante [3], Viola Signorini [3], Chiara Cardelli [4], Francesca Trentin [3], et.al., Systemic lupus erythematosus: one year in review 2023, Clin Exp Rheumatol. 2023 May;41(5):997-1008. doi: 10.55563/clinexprheumatol/4uc7e8. Epub 2023 May 3.

Marianthi Kiriakidou [1], Cathy Lee Ching, Systemic Lupus Erythematosus, Ann Intern Med. 2020 Jun 2;172(11):ITC81-ITC96. doi: 10.7326/AITC202006020.

Giulio Fortuna [1], Michael T Brennan, Systemic lupus erythematosus: epidemiology, pathophysiology, manifestations, and management, Dent Clin North Am. 2013 Oct;57(4):631-55. doi: 10.1016/j.cden.2013.06.003.
Philippe Mertz [1 2], Aurélien Schlencker [1 2], Matthias Schneider [3], Pierre-Edouard Gavand [2 4], Thierry Martin [2 4], Laurent Arnaud, Towards a practical management of fatigue in systemic lupus erythematosus, Lupus Sci Med. 2020 Nov;7(1):e000441. doi: 10.1136/lupus-2020-000441.
Furong Zeng [1], Qianyun Xu [1], Di Liu [1], Hui Luo [1], Ya-Ou Zhou [1], Wangbin Ning [1], et.al., [1], Relatives' quality of life and psychological disturbance: a new concern of SLE management, Clin Rheumatol. 2018 Jan;37(1):67-73. doi: 10.1007/s10067-017-3743-1. Epub 2017 Jul 8.

Chiara Tani [1], Elena Elefante [2], Laurent Arnaud [3], Sofia C Barreira [4], Inita Bulina [5], Lorenzo Cavagna [6], et.al.,, Rare clinical manifestations in systemic lupus erythematosus: a review on frequency and clinical presentation, Clin Exp Rheumatol. 2022 May;40 Suppl 134(5):93-102. doi: 10.55563/clinexprheumatol/jrz47c. Epub 2022 Apr 29.
Alessandro Marone [# 1], Wei Tang [# 2], Youngwan Kim [1], Tommy Chen [2], George Danias [2], Cathy Guo [2], et.al.,, Evaluation of SLE arthritis using frequency domain optical imaging, Lupus Sci Med. 2021 Aug;8(1):e000495. doi: 10.1136/lupus-2021-000495.
Naglaaa Afifi et al. Clinical features and disease damage risk factors in an Egyptian SLE cohort: A multicentre study, Curr rheumatol Rev. 2021

Laniyati Hamijoyo et al. comparison of clinical presentation and outcome of childhood-onset and adulthood onset of systemic lupus erythematosus among Indonesian patients, Lupus 2022 May.
Rodrigo Hasben, Progress and Challenges in bacterial meningitis: A review, JAMA 2022.

Bruniera FR, et al, The use of vancomycin with its therapeutic and adverse effects: a review, Eur Rev Med Pharmacol Sci. 2015.

K L Roos. Acute bacterial meningitis, Semin Neurol 2000.
Courtney Stull et al., Cutaneous involvement in systemic lupus erythematosus: A review for the rheumatologist, J Rheumatol. 2023 Jan.

Durcan L, et al, Management strategies and future directions for systemic lupus erythematosus in adults, Lancet, 2019.

A M Ahmmad et al. Mymensingh, Pattern of initial clinical presentation of Systemic lupus erythematosus: A hospital-based cross-sectional study from Bangladesh, Med J, 2022 July.

Antonis Fanouriakis et al. Uptade on the diagnosis and management of systemic lupus erythematosus, Ann Rheum Dis. 2021 Jan.

ISSN: 2663-5798 || Arab Journal for Scientific Publishing

الإصدار السابع – العدد اثنان وسبعون
تاريخ الإصدار: 2 – أكتوبر – 2024م
www.ajsp.net

"الذَأَبُ الحُماميُّ الجِهازيُ، عرض غير اعتيادي: تقرير حالة في مستشفى آزال، صنعاء، اليمن"

إعداد الباحثون:

الأستاذ الدكتور عدنان عبده حسين الأدهل،

أستاذ علم الأدوية والمداواة، جامعة صنعاء، اخصائي الباطنة العامة، الرثويات وأمراض الحساسية والمناعة الذاتية، مستشفى آزال، صنعاء، اليمن.

الدكتور عمرو الأدهل

اخصائي جراحة العيون، مستشفى الكويت، صنعاء، اليمن.

الدكتور عبد الله الأدهل

اخصائي الأشعة التشخيصية، مستشفى الكويت، صنعاء، اليمن.

الملخص:

الذَأَبُ الحُماميُّ الجِهازيُ هو مرض من أمراض المناعة الذاتية يصيب النسيج الرابط، يتميز بأعراض متنوعة وله القدرة على التأثير على العديد من أعضاء الجسم. وهذا المرض يصيب الإناث بصورة أكثر من الرجال وخاصة النساء الشابات وفي منتصف العمر.

في هذا البحث وثقنا حالة أنثى في التاسعة عشر من العمر تعاني من حمى شديدة وصداع وشعور بالتعب مع تيبس الرقبة. الفحوصات أظهرت ارتفاع كريات الدم المتعادلة. وشُخِّصَت الحالة بالتهاب السحايا البكتيري. وحالاً تم إعطاء المريضة المضادات الحيوية ومخفضات الحرارة المناسبة. بعد أيام تحسنت حالة المريضة، ولكنها شكت من آلام في المفاصل وآفات جلدية مما أثار شكوكاً في إصابتها بمرض الذَأَبُ الحُماميُّ الجِهازيُ، وتم التأكيد بفحص المضادات الجسيمية ds–DNA وANA والتي كانت نتائجها إيجابية.