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Case Report

Concomitant Discovery of Systemic Lupus and Multiple Myeloma: Is It a Coincidence?

Sara Anibar*, Ihsene Cherradi, Mohammed Bouchoual, Marouane Jabrane, and Mohamed Arrayhani

Nephrology Department, Souss Massa University Hospital, Faculty of Medicine, Ibn Zohr University, Agadir, Morocco

Abstract

Introduction: It has been suggested that patients with autoimmune diseases are more likely to develop other malignancies. However, the association between lupus and multiple myeloma (MM) is still not much described in the literature.

Case Report: We report the observation of a 46-year-old female patient, in pre-menopause, in whom the diagnosis of systemic lupus was retained (SLICC criteria 7) with cutaneous, joint, hematological, immunological, and renal involvement. The discovery of MM was suspected due to a peak in gamma globulins on plasma protein electrophoresis and confirmed by myelogram. The outcome was fatal due to septic shock before starting any immunosuppression.

Discussion and Conclusion: In this literature review, 15 cases are reported on the occurrence of MM years after the diagnosis of lupus, only two cases were like our observation with a concomitant diagnosis of the 2 diseases. The management is still not codified; hence the prognosis of this association remains reserved, encouraging early detection of malignant plasma cell proliferation.

Keywords: multiple myeloma, systemic lupus, concomitant, diagnostic

Corresponding Author:
Sara Anibar
Email: s.anibar@uiz.ac.ma, saraanib.209@gmail.com

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1. Introduction

Systemic lupus erythematosus (SLE) is a chronic systematic autoimmune illness, linked to a dissociable immune answer in reply to a complex interaction between genetic and environmental factors [1].

Although its association with hematological malignancies has been described in the literature, the evolution toward monoclonal plasma cell proliferation remains exceptional [2]. Some observations are represented regarding the occurrence of multiple myeloma (MM) after years of monitoring of lupus.

We report the case of a 46-year-old patient, in whom the diagnosis of lupus was concomitant with the discovery of MM.

2. Case Report

It is about a 46-year-old female patient, with a history of ischemic heart disease 2 years ago, under medical treatment only; the creatinine level done in this time was 1mg/dL with creatinine clearance at 63ml/min/1.73m^2, without any other documents.

The patient was admitted to our department for clinical-biological uremic syndrome revealed by a progressive installation of digestive symptoms evolving 10 days before her admission. The initial assessment revealed a glomerular syndrome, consisting of severe renal failure with urea levels of 3.52 g/L, creatinine levels of 2.72mg/dl then 4.4 mg/dL within 2-days interval, high blood pressure at 160-180/90-100 mmHg, an edematous syndrome, and active urinary sediment with proteinuria and hematuria on the urine evaluation. Over the last year, the patient reported inflammatory polyarthralgia of the small and large joints, alopecia, and oral ulcerations with deterioration of general state, not explored.

The complement of the exploration objectified a massive nephrotic syndrome, proteinuria at 3g/24hr, albumin level at 16g/L, protein level at 65g/L; and bicytopenia (hemoglobin: 9g/dL, normochromic regenerative normocytic anemia, thrombocytopenia: 95,500 elements/mm^3, lymphopenia: 900 elements/mm^3). Infectious syndrome with a CRP at 109 mg/L and procalcitonin at 9.26 ng/ml, the sedimentation rate was 100 mm in the first hour.

In the present criteria for systemic lupus with an SLICC score of 7 points, the additional assessment revealed a low rate of C3 and C4 (0.32g/L and 0.07g/L, respectively) and positive antinuclear antibodies at 1/640. Thus, the SLEDAI activity score was 24 points. A kidney biopsy was suggested but delayed due to abnormalities in the blood clot and the uncontrolled urinary tract infection.

However, serum protein electrophoresis, routinely performed because of the patient's age and nephrotic syndrome, showed a monoclonal peak in gamma globulin of the IgG lambda heavy chain type in complement immunoelectrophoresis, bone marrow was justified by consequence, which showed a plasmocytosis at 16% made of dystrophic plasma cells; therefore, the diagnosis of MM was retained. The electrophoresis of urinary proteins was not done in the context of the urinary tract infection. The rest

of the assessment, in particular the skeletal radiography did not reveal any bone lesions; however, the corrected calcium was high (125mg/L).

Therapeutically, in addition to symptomatic treatment and hemodialysis, the decision to start chemotherapy and lupus treatment was postponed due to septicemia with pulmonary and urinary origin (multidrug-resistant Klebsiella with right basal lung focus). Evolution was fatal due to septic shock.

3. Discussion

SLE is a multisystem autoimmune pathology that progresses through pushed remission. It is associated with significant morbidity and mortality. Its prognosis depends principally on the type of organs affected, particularly kidney damage [3]. It is well known in the literature that SLE patients are at significant risk of malignancy. Several intertwined physiopathological mechanisms exist, including immunological autoimmunity, the role of immunosuppressors, and a predisposition to infections that can lead to oncogenic transformation [4-6]. However, the association of MM with SLE remains rarely described [7]. It is about an MM exceeding lupus after years of monitoring, in most cases. MM is a dysglobulinemia characterized by the diffuse and monoclonal proliferation of plasma cells, is responsible for the monoclonal secretion of an immunoglobulin found in the blood and urine [8]. It preferentially affects men over 60 years old. Fifteen cases of the combination of these two diseases are reported in the literature [9]. The appearance of the MM was on average 7 years after the diagnosis of lupus [6, 9]. Only two cases have a concomitant happening, like the condition of our patient, a 69-year-old woman with a history of breast cancer and a 35-year-old young woman [9]. Nevertheless, the physiopathological mechanism involved in this association was insufficiently developed in the literature [9]. Suspicion of MM was based on the unexplained abnormality of renal function, and the presence of a monoclonal peak, as was the case of our patient [6]. The prognosis of these patients was adverse in half of the reported cases. The treatment is still not codified [7]. It must consider the lupus activity, the control of noble organ lesions and the evolution of MM, and not forget the patient's general condition [3, 8, 9].

4. Conclusion

The association between SLE and MM remains rarely described. Physiopathology is still poorly understood. Its severe course underlines the importance of close monitoring of patients with SLE to detect any malignant transformation early.

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Statement of Ethics

We declare respect for all medical ethics reported in accordance with the World Medical Association (WMA) Declaration of Helsinki.

Ethical Approval

For clinical cases, the ethical policy of our faculty only requires informed consent from the patient and respect for anonymity.

Patient Informed Consent Statement

We declare that written informed consent has been obtained from our patient and her family (her husband) to publish this case.

Conflict of Interest

The authors declare that there is no conflict of interest.

Artificial Intelligence (AI) Disclosure Statement

AI-unassisted work.

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Data Sharing Statement

We submit all information in this article for publication.

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