



## CASE REPORT

doi:10.18575/msrs.sm.e.16.14  
UDK: 616-002.52  
COBISS.RS-ID: 5700888

# Response to Mycophenolate Mofetil Therapy in the Patient with Severe Systemic Lupus Erythematosus

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## ABSTRACT

Systemic lupus erythematosus (SLE) is a disease of unknown etiology in which tissues and cells are damaged by pathogenic autoantibodies and immune complexes. About ninety percent of patients with lupus are women between the ages of 20 and 40. The disease may affect only one organ system, and it also can be a multisystem and affect the skin, joints, kidneys, lungs, nervous system, and serous membrane. In the case report is presented a 38 year old patient with severe systemic lupus erythematosus, which adequately reacted to the treatment of mycophenolate mofetil.

**Keywords:** Systemic lupus erythematosus, the effect of therapy, mycophenolate mofetil.

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(Scr Med 2016;47:74-75)

Submitted: January 25th 2016

Accepted: February 9th 2016

## Introduction

Systemic lupus erythematosus (SLE) is a disease of unknown etiology in which tissues and cells are damaged by pathogenic autoantibodies and immune complexes.<sup>1</sup> Ninety percent of lupus patients are women, usually in the reproductive stage of life, but children, elderly and men can also become infected.<sup>2</sup> SLE is manifested by subjective and clinical signs usually on the skin, joints and internal organs. Good knowledge of the patient and the activities of his/hers illness and disease course are decisive factors in the choice of pharmacotherapy: salicylates, NSAIDs, antimalarials, corticosteroids, immunosuppressive agents and monoclonal antibodies.<sup>3</sup>

## Case report

In March 2009, 38-year-old patient was admitted to the Department of rheumatology because of poor general condition, weakness and pain in the joints and muscles.

Her medical history showed that she had been treated under a diagnosis of seronegative rheumatoid arthritis since August 2007 and the treatment involved low-dose corticosteroids and hydroxychloroquine. The patient did not check in for regular controls for a longer period of time. The objective findings showed pale skin and visible mucous membranes, with butterfly rash on the face, pitting edema of the lower leg and foot dorsum, as well as synovitis in talocrural joints. Laboratory findings showed severe anemia with the values of erythrocytes  $0.41 \times 10^{12}/l$  and hemoglobin 4.8g/dl, increased levels of protein in the urine 4.8g/24h, decreased creatinine clearance of 49ml/min, urinary protein positive (+++), reduced value of complement components, a positive ANA test, a positive anti-dsDNA  $>200IU/ml$ , anti-ssDNA positive  $>200IU/ml$ . During hospitalization, the patient was treated with methylprednisolone in a dose of 1 mg/kg/day, antibiotics and transfusion of packed red blood cells. Mycophenolate mofetil in a dose of 2000 mg daily was

given on the seventh day of hospitalization. Due to the low value of red blood cells at the beginning of treatment, pulse therapy with cyclophosphamide was not used. Additional worsening of the disease (low value in the red blood cells) occurred on the twentieth day of treatment. After established deterioration in the hematopoietic system, we decided to administer methylprednisolone pulse therapy for three days, at a daily dose of 1000 mg parenteral. After the abovementioned, stability in red bloodline was accomplished. After the hospital treatment, high proteins values in urine 3.4 g/24h and reduced creatinine clearance 31ml/min remained. The patient was discharged with recommendations about therapy with corticosteroids, mycophenolate mofetil, hydroxychloroquine, osteoporotic protection and antiplatelet therapy. The patient had come for regular checkups and at the last control, in September 2015, the value of protein in urine and creatinine clearance, as well as other laboratory parameters were within normal values.

### Discussion

The case of presented patient is discussed in terms of diagnosis systemic lupus erythematosus in accordance with the criteria for the diagnosis and extremely favorable response after methylprednisolone pulse therapy and continuous therapy with mycophenolate mofetil. Symptoms and signs in our case are meeting the criteria for diagnosis. There are 6 of the eleven criteria for the classification of systemic lupus erythematosus in the patient: malar rash, arthritis, kidney disorders, hematological disorders, positive antinuclear antibody and a positive anti-dsDNA and anti-ssDNA antibody.<sup>4</sup> The case report is shown due to the importance of early diagnosis of sys-

temic lupus erythematosus, and early aggressive treatment.

### Conclusion

Due to inability to perform kidney biopsy, clinical-laboratory assessment is very important in individual therapeutic approach to these patients in order to achieve long-term remission of the disease. This case report presented the patient who was treated promptly with aggressive therapy pulse doses of methylprednisolone and high doses of mycophenolate mofetil and who achieved complete laboratory and clinical remission of the disease.

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PMid:10911799 PMCID:PMC1731203

## Odgovor na terapiju mikofenolat mofetilom kod pacijentice sa teškim oblikom sistemskog eritemskog lupusa

### SAŽETAK

Sistemski eritemski lupus (SEL) je bolest nepoznate etiologije u kojoj su tkiva i ćelije oštećeni patogenim autoantitijelima i imunskim kompleksima. 90% oboljelih su žene, a starosna dob u kojoj najčešće oboljevaju je između 20. i 40. godine života. Bolest može zahvatiti samo jedan organski sistem, a može biti i višesistemska i zahvatiti kožu, zglobove, bubrege, pluća, nervni sistem i serozne membrane. U radu je prikazan slučaj 38-ogodišnje pacijentice sa teškim oblikom sistemskog eritemskog lupusa, koji je adekvatno odreoovao na terapiju mikofenolat mofetilom.

**Ključne riječi:** Sistemski eritemski lupus, efekat terapije, mikofenolat mofetil