

## Case Report

# A case of rheumatoid arthritis with features of systemic lupus erythematosus

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### ABSTRACT

A 50 year old female presented with features qualifying for both rheumatoid arthritis (RA) and systemic lupus erythematosus (SLE). Patient fulfilled 10/10 ACR-EULAR criteria for RA, her anti-CCP was positive (21.6 RU/ml), her DAS28 score was 7.55 (favouring RA) and she fulfilled  $\geq 4$  of 11 criteria's of SLE (definite SLE). Coexistence of SLE and RA is known as "rhupus". The immunopathological process of SLE and RA are considered to be exact opposite of one another so their coexistence remains one of the debated topics of rheumatology.

**Keywords:** SLE, RA, Rhupus

### INTRODUCTION

Coexistence of systemic lupus erythematosus (SLE) and rheumatoid arthritis (RA) is one among the many controversies which has perplexed physicians.<sup>1,2</sup> The first case of overlap between SLE and RA was described in 1969 by Kantor. In 1971 Peter Schur coined the term rhupus. However it was not established if this overlap was a mere coincidence or a clinical entity of its own.

### CASE REPORT

A 50 year old female was admitted with presenting complaints of fever on and off, associated with loose motions, fatigue, and malaise from last 5-6 months. She gave a history of multiple joint pains from last 6-7 months. Joint involvement was B/L symmetrical involving small and large joints of both upper and lower limbs. The lady also gave history of early morning stiffness and increase in stiffness with period of inactivity.

No H/O tuberculosis, dengue, chikungunya, malaria, typhoid, exanthematous fever, rash, photo sensitivity or exposure to heavy metals.

Patient takes mixed diet. Bowel and bladder movements normal. No similar illness in family.

#### Clinical examination

- Afebrile
- BP – 130/80 mm Hg, PR- 78/min, regular
- Chest – B/L clear
- CVS – S1, S2 audible, no added sound heard.
- P/A- soft, no organomegaly
- Joints- swollen, warm, tender, limitation of movements. B/L symmetrical involvement.
- Ulcer present on oral mucosa, stomatitis.
- Pallor – present.

### Investigations

- Hb – 6.1%, wbc-11800/cu mm, (N65, L32, E2, M1, B0)
- Serum Na- 140 meq/L, Serum K – 3.6 meq/L
- Serum Bilirubin- 0.3 mg/dl
- ALT/AST/ALP- 35/91/330 U/L
- Blood Urea- 28 mg/dl,
- Sr Creatinine – 0.8 mg/dl
- ESR- 38mm (1<sup>st</sup> hr)
- CRP – Positive (37.42 mg/ L)
- RA factor- 7.3 IU/ml
- Anti CCP (IgG) – Positive (21.6 RU/ml)
- ANA- Positive (Speckled pattern)
- Smith Antibody- Detected,
- ds-DNA- Negative

Urine protein/creatinine Ratio- 0.7 grams protein per gram creatinine (normal <0.2 grams protein per gram creatinine).

### Factors favouring RA

- >10 joints involved including small joints.
- Anti – CCP – Positive
- CRP – Positive, ESR – Elevated
- Duration of symptoms >6 months

According to ACR-EULAR criteria for RA patients score is 10/10. (Score  $\geq 6$  fulfils the requirement of definite RA).

Patient's DAS 28 score is 7.55.

### Factors favouring SLE

- Arthritis
- Oral ulcer
- Proteinuria
- ANA – Positive
- Anti Smith – Positive
- She fulfils  $\geq 4$  of 11 criteria's of SLE (Definite SLE).

### Diagnosis and treatment

Patient was diagnosed as a case of rheumatoid arthritis with features of SLE also known as rhusus. She was treated with steroid, methotrexate, hydroxy -chloroquine, folic acid. The patient showed improvement with treatment.

### DISCUSSION

Rhusus is an infrequently reported clinical condition which shares the clinical characteristics of both SLE and RA. Rhusus even today remains a diagnostic dilemma because the immuno-pathological process of SLE and RA are considered to be exact opposite of one another. Th2

cytokines play central role in pathogenesis of SLE where as the key player in RA are Th1 cells.

In a study published in 1987 Cohen and Webb reported overlap of SLE with RA in 11 cases.<sup>6</sup> In 1992 Brand reported 11 cases of rhusus in which most cases were MHC class II restricted. Later in 2002 a study conducted in Mexico where 22 patients were studied showed an increased prevalence of HLA DR1 and DR2.<sup>4</sup>

In one large study of 7000 new patients Panush et al found the prevalence of RA and SLE to be 15% and 8.9% respectively. Statistically expected coincidence for Rhusus was calculated to be 1.2% but the observed coincidence was only 0.09%.<sup>3</sup>

In 2008 a study evaluated 34 patients with SLE (14 with deforming and 20 with non-deforming arthropathy). 34 patients with RA and 9 patients with rhusus were used as control.<sup>5,7</sup>

**Table 1: Comparing presence of anti CCP in SLE, RA and rhusus.**

Condition	Anti CCP
SLE with or without deforming arthritis	Negative
RA	97% positive
Rhusus	100% positive

### CONCLUSION

Rhusus still remains a puzzle for physicians. As a physician we need be aware of this condition and make attempt for early recognition and prompt diagnosis so that effective treatment could be initiated.

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### REFERENCES

1. Malaviya AN. Rheumatoid Arthritis. API textbook of medicine .10th edition.
2. Joshi VR. Systemic Lupus Erythematosus. API textbook of medicine. 10th edition.
3. Panush RS, Edwards NL, Longley S, Webster E. 'Rhusus syndrome'. Arch Intern Med. 1988;148:1633-6.
4. Simon JA, Granados J, Cabiedes J, Morales JR, Varela JA. Clinical and immunogenetic characterization of Mexican patients with 'rhusus'. Lupus. 2002;11:287-92.
5. Amezcua-Guerra LM, Springall R, Marquez-Velasco R, Gómez-García L, Vargas A, Bojalil R. Presence of antibodies against cyclic citrullinated peptides in patients with "rhusus": a cross-sectional study. Arthritis Res Ther. 2006;8(5):R144.

6. Cohen MG, Webb J. Concurrence of rheumatoid arthritis and systemic lupus erythematosus: report of 11 cases. *Ann Rheum Dis.* 1987;46:853-8.
7. Damian-Abrego GN, Cabiedes J, Cabral AR. Anticitrullinated peptide antibodies in lupus patients with or without deforming arthropathy. *Lupus.* 2008;17:300-4.

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