Reverse Relationship of Uric Acid and Vitamin D3 in Adult Patients with Rheumatoid Arthritis and Systemic Lupus Erythematosus

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Background: The relationship between uric acid (UA) and vitamin D3 (25(OH)D) in rheumatoid arthritis (RA) and systemic lupus erythematosus (SLE) patients has not been settled yet.

Objective: To evaluate a possible link between UA and 25(OH)D serum levels and vitamin D3 therapy in patients with RA compared to SLE.

Design: A Retrospective Study.

Setting: Salmaniya Medical Complex, Ministry of Health, Bahrain.

Method: Eighty patients with RA and SLE from March 2015 to September 2018 were included in the study. Serum level of UA and 25(OH) D levels were estimated before and after oral vitamin D3 therapy. Data were analyzed using SPSS version 19.

Result: RA and SLE had a significant increase in mean serum 25(OH)D, (P=0.0001) after vitamin D3 therapy, but a decreased mean serum UA (P=0.0001). The increase in 25(OH)D was more prominent in SLE (P=0.0001) compared to RA (P=0.002), while the decrease in serum UA after vitamin D3 therapy was more prominent in RA (P=0.0001) compared to SLE (P=0.048).

Conclusion: We found an inverse relation between serum 25(OH)D and UA in adult Bahraini patients with RA and SLE, which was more pronounced in RA compared to SLE patients.

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