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## Obstructive sleep apnea in patients with rheumatoid arthritis: Correlation with disease activity and pulmonary function tests

Neven Mahmoud Taha Fouda and Aya Abdel Dayem  
Ain Shams University, Egypt

**Aim:** To assess obstructive sleep apnea (OSA) as one of common primary sleep disorders in patients with rheumatoid arthritis (RA) and its correlation to disease activity and pulmonary function tests.

**Patients and methods:** This study included 30 female patients with RA fulfilled the modified American College of Rheumatology (ACR) criteria. All the patients were subjected to full medical history, thorough clinical examination with evaluation of the disease activity using Disease Activity Score 28 (DAS28), laboratory assessment of highly sensitive C reactive protein (hsCRP), pulmonary function tests (FVC- FEV 1 and FEV 1/FVC) and one night polysomnography (PSG) at the sleep laboratory.

**Results:** Polysomnographic data revealed OSA in 14 RA patients (46.7%). Patients with OSA showed longer disease duration (mean  $7.0 \pm 1.94$  y), higher BMI (mean  $30.8 \pm 2.48$ ), higher hsCRP ( $6.7 \pm 0.6$  mg/L) and higher DAS28 ( $4.9 \pm 1.85$ ) than patients with no OSA (mean  $4.0 \pm 1.72$  y,  $20.3 \pm 1.55$ ,  $4.9 \pm 0.3$  mg/L and  $3.7 \pm 1.28$  respectively). There was statistically non-significant difference between both groups as regards results of pulmonary function tests ( $p > 0.05$ ). The study showed statistical significant correlation between AHI (apnea-hypopnea index) and BMI, hs CRP and DAS 28 ( $r = 0.45, 0.43$  and  $0.51$  respectively  $p < 0.05$ ).

**Conclusion:** OSA is commonly associated with patients with RA. This possibly suggests common underlying pathological mechanisms which may be linked to chronic inflammation. Co-existence of OSA in RA patients will influence the disease activity and the level of circulating inflammatory markers in these patients. Diagnosis and treatment of OSA in RA patients may help in improved clinical care, better prognosis and avoid rheumatoid-associated morbidities.

### Biography

Neven Mahmoud Taha Fouda is a Professor of Physical Medicine, Rheumatology and Rehabilitation, Ain Shams University Hospitals. She received MD in 2003 from Ain Shams University, Cairo, Egypt. She has license to practice medicine in Egypt and worked as consultant of Physical Medicine, Rheumatology and Rehabilitation in many hospitals in Saudi Arabia. She has experience in intra-articular and extra-articular injection and diagnosis by nerve conduction and electromyography. She is also active member in the Egyptian society of Rheumatology and Rehabilitation and Egyptian society of joint disorders and arthritis.

[neveen\\_fouda@yahoo.com](mailto:neveen_fouda@yahoo.com)

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