

**Incidence of carotid atherosclerosis in women with systemic lupus  
Erythematosus and its correlation with other disease parameters**

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## ABSTRACT

**Purpose:** To determine the incidence of premature carotid atherosclerosis in Egyptian SLE premenopausal woman and to evaluate the risk factors associated with atherosclerosis and Its correlation with disease parameters.

**Methods:** Intima media thickness was measured by B-mode ultrasound in 40 SLE premenopausal female patients (aged 16-48) and 10 age matched normal female controls. Full history taking and clinical examination. Laboratory investigations including: routine lab tests to assess SLE, anticardiolipin antibodies, lab tests for cardiovascular evaluation like fasting serum lipids, C reactive protein, albumin, blood glucose, uric acid, Fibrinogen and insulin level measurements were carried out.

**Results:** Cardiovascular manifestatins were detected in 36 patients (90%), where Raynauds' phenomenon was found in 12 patients (30%), hypertension in 21 patients (52.5%) and carditis in 12 patients (30%). Neurological manifestations were detected in 15 patients (37.5%) and renal affection in 17 patients (42.5%) of the cases. Eight SLE patients (20%) had high Intima media thickness (IMT) (above 0.6mm), two of whom had atherosclerotic plaques (5%). When comparisons were done between patients with high IMT and those with normal IMT, the former showed significantly higher systolic and diastolic blood pressure, hypercholesterolimia and hypoalbuminemia. There was a positive significant correlation between IMT and cholesterol as well as the fasting insulin level in SLE patients. Also there was a positive correlation found between SLE Disease Activity Index (SLAM) and triglycerides' levels. When relations of the risk factors of coronary heart disease were compared between SLE patients and controls, the SLE patients were found to have significantly h insulin level, significant hyboalbuminemia and significantly increased intima media thickness.

**Conclusion:** The prevalence of premature atherosclerosis (IMT more than 0.6mm) in our SLE premenopausal female patients (20%) was found to be lower than that of European or American patients which could be attributed to racial factors. Also the most susceptible SLE patients to develop premature atherosclerosis and coronary heart disease is those with hyper-cholestrolemia or abnormal serum lipid profiles, high blood pressure level, hyper-uricaemia, hypo-albuminaemia and hyper-insulinamia.

Key words: carotid atherosclerosis; intima media thickness; SLE; risk factors.