**Abstract:**

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**Objective:** Cluster of differentiation 163 (CD163) is a receptor that binds haptoglobin-hemoglobin complexes and is expressed mainly on macrophages and monocytes. As a result of shedding, the extracellular portion of CD163 circulates in blood as a soluble CD163 (sCD163). This study aimed to measure sCD163 serum levels in systemic sclerosis (SSc) patients and to assess its relation with the clinical, laboratory and radiological features of the disease. **Material and Methods:** We measured sCD163 in the serum from 24 SSc patients and in the serum from 30 healthy controls. The patients were subjected to full history taking and thorough clinical rheumatological and dermatological examinations. In SSc, the skin thickness score was scored according to the modified Rodnan skin score (MRSS) method and pulmonary involvement was assessed in all patients by high resolution computerized tomography (HRCT) and pulmonary function tests (PFTs). **Results:** The mean sCD163 serum levels in the patients with diffuse and limited SSc was (61.64 ± 19.57 and 60.8 ± 21.43 ng/ml respectively) showed a highly statistically significant increase as compared to the mean serum levels in the control (36.97±16.37 ng/ml)(p<0.001). SSc patients with elevated sCD163 serum levels had significantly higher pulmonary artery systolic pressure (PASP) than those with normal sCD163 serum levels (p<0.05). Also, serum level of sCD163 significantly correlated with PASP (r=0.53, p <0.05). In SSc patients. the mean sCD163 serum level in SSc patients with digital ulceration (DU) (70.82± 18.3 ng/ml) showed a statistically significant increase (p<0.05) compared to SSC patients without DU (53.23 ± 18.09 ng/ml). **Conclusion:** the elevated sCD163 serum levels in systemic sclerosis patients and its association with pulmonary hypertension suggesting a possible role of macrophages in the pathogenesis and vascular involvement of systemic sclerosis.