

underlying pathology is either of tissue destruction, tissue proliferation, depolymerization or inflammation^[8,9]. The role of total sialic acid (TSA) includes a small amount of free sialic acid as well as glycoprotein and glycolipid-bound sialic acid (LSA) in the various pathological processes promoted us to investigate and find some typical differences between the content of TSA and LSA values in sera patient with Rheumatoid Arthritis and compared with normal group.

Materials and Methods

Chemicals: Standard solution for sialic acid of 500µg/ml concentration was prepared by dissolving 50 mg of standard N-acetylneuraminic acid in 100 ml of distilled water, and on the day of determination, the stock solution was diluted with phosphate buffer saline at pH 7.4 to give the following standard solutions (5.0, 10.0, 15.0, 20.0, 25.0, 30.0 µg/ml) for calibration curve measurement.

Subjects: Sera samples of the measurement of TSA and LSA were obtained from five groups of subjects who were attending

Rheumatology Outpatient Clinic Division in Baghdad Teaching Hospital- Medical City from April to August 2004.

The patients with RA were divided in to two groups after evaluation of their disease activity by the Tentative EULAR Criteria^[10]. [Number of tender joints: maximum 28; number of swollen joints; maximum 28; pain score: zero (no pain) to 10 (very sever pain), erythrocyte sedimentation and morning stiffness of at least 30 min duration].

Group (1) consisted of 43 adult healthy blood donors as control subjects. Mean age was 44.3±4.2 (range: 19-64) with the male to female ratio being 0.72.

Group (2) and (3) consisted of patients (8 male, 21 female) were enrolled with less than 14 swollen joints and one hour morning stiffness were considered to have low activity of the disease.

Group (4) and (5) consisted of 25 patients (9 male, 16 female) had been diagnosed with a higher number of swollen joints and more prolonged morning stiffness, were considered to have a high degree of inflammation. Characteristics of the above groups were presented in table 1 and 2.

Table 1: Characteristics of the Rheumatoid Arthritis Groups (2) and (3) low activity

Character	Group (2)	Group (3)
Sex	Male	Female
No. of patients	8.0	21.0
Age range (yrs)	32-65	19-16
Mean age (yrs)	55.30±1.90	48.8±2.30
Duration of disease (yrs)	6.90±1.10	5.90±1.20
Morning stiffness (h)	0.70±0.20	1.10±0.30
No. of tender joints	15.20±3.0	16.20±2.30
No. of swollen joints	6.10±1.20	8.90±2.0
ESR (mm/h)	36.0±8.0	34.0±2.0
Positive rheumatoid factor	5/8	17/21