SUMMARY AND CONCLUSION

Rheumatoid arthritis (RA) is one of the commonest chronic inflammatory diseases, characterized by inflammation of the synovium and pannus formation in the diseased joint, which may lead to eventual degradation of the articular and the subchondral bone **(Albani and Carson,1997)**

Colony stimulating factors (CSFs) are involved in directing the division and differentiation of bone marrow stem cells, and the precursors of blood leukocytes. The balance of different CSFs is partially responsible for the proportions of different cell types, which will be produced. Some CSFs also promote further differentiation of cells outside the bone marrow ***(Nicola, 1989).***

The aim of this work is to determine the level of the granulocyte colony stimulating factor (G-CSF) in the serum and synovial fluid of patients with RA and to evaluate its relationship to disease activity and severity in these patients.

Our study comprised 30 RA patients diagnosed according to the revised the American College of Rheumatology.

They were selected from out patient clinic of Rheumatology and Rehabilitation department of Benha university hospital and Benha teaching hospital.

A control group of 20 apparently healthy individuals matched for age and sex to our patients And suffering from traumatic synovitis excluding metabolic and inflammatory disorder. was also included.

All members of this study were submitted to the following:

a) Full history taking and thorough clinical examination including general and systemic examination.

b) Examination of the loco motor system with special stress on the affected joints .

(1) Assessment of grip strength

(2) Assessment of pain using visual analogue scale (VAS)

(3) Assessment of joint tenderness using Ritchie articular index .

(4) Assessment of disease activity according to (DAS 28) index

(5) Assessment of functional status using the American College of Rheumatology .

(6) Assessment of disease severity using the clinical spread severity index .

c) Radiological investigation

d) Laboratory investigation

Included the following :

- Full blood picture, hemoglobin concentration (gm/dI).
- Erythrocyte sedimentation rat (mm/h) by Westergren method.
- C –reactive protein.
- Rheumatoid factor (RF) test by latex agglutination method.
- Estimation of G-CSF in serum and synovial fluid of patients and control using ELISA technique.

Thirty patients suffering from RA were include in this study. Their ages ranged between 28-75 years with a mean age of 47.17 years S.D. ± 10.92 years. They were 25 females (83.3%) and 5 males (16.7%). A control group of 20 apparently healthy individuals suffering from traumatic synovitis matched to ours patients group was also included their

ages ranged between 30-69 years with a mean of 47.60 years S.D ± 10.920 years.

The different parameters among our patients their duration of disease (years) ranged between 1.0 – 20.0 years (Mean 7.57 ± 5.03). morning stiffness (minutes) ranged between 10.0 – 130.0 minutes (mean 57.4 ± 35.0) visual analogue scale (m.m) ranged between 2.0 – 8.0 (mean 5.36 ± 1.63). Ritchie articular index ranged between 4.0- 50.0 (mean 26.27 ± 13.61).

In comparison between the studied patients and control regarding synovial and serum G.S.CF. level of synovial fluid in our patient(1.36±0.69) is higher than controls(0.47±0.07) its highly significant p <0.01. and level of serum of patients(0.87±0.531) its high than controls (0.47±0.04) its (P< 0.05) Significant.

In our 30 RA patients rheumatoid factor positive in 24 patient and negative in 6 patients. subcutaneous nodules present in 12 patient and absent in 18 patients .the levels of G-CSF is high with positive patient and presence of subcutaneous nodules (P< 0.05) Significant.

Correlation between levels of G-CSF in serum and clinical and laboratory parameters. Non significant between levels of G-CSF in serum and duration of disease, and X-ray grade of knee. A significant between levels of G.C.S.F. and visual analogue scale. Highly significant between serum fluid G.C.S.F. and morning stiffness, Ritchie articular index, functional capacity, activity index, E.S.R. 1st hour hemoglobin and R.F.

Correlation between levels of G-CSF in synovial fluid and clinical and laboratory parameters. Non significant between levels of G-CSF in synovial fluid and duration of disease, and X-ray grade of knee . A significant between levels of G.C.S.F. and visual analogue scale . Highly significant between synovial fluid G.C.S.F. and morning stiffness, Ritchie articular index, functional capacity, activity index, E.S.R. 1st hour hemoglobin and R.F.

No correlation between levels of G-CSF in serum and synovial fluid and different medication among patients .

Conclusion:

So, from our study we can conclude that G-CSF is an important cytokine in the pathogenesis of RA as evidenced by its high level in serum and synovial fluid of RA patients.

Our results also imply that G-CSF might be clinically useful indicator of RA activity and severity as well as it may be helpful in the disease management.