

RESULTS

Thirty patients suffering from RA were included in this study. Their ages ranged between 28-75 years with a mean age of 47.17 years. \pm 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 excluding metabolic and inflammatory disorder matched to our patients group was also included. Their ages ranged between 30-69 years with a mean of 47.60 years \pm S.D. 10.920 years.

Table & figure (1), show patients and controls matched regarding age. No significant difference ($P > 0.05$) was observed between patients and controls .

Table & figure (2), show patients and controls were matched as regarding sex. No significant difference ($p > 0.05$) was observed.

Table & figure (3), show mean value, standard deviation (SD) and range of different parameters among our patients.

Table & figure (4) show comparison between patients and controls regarding synovial and serum G-CSF. A highly significant $p < 0.01$ difference was observed between both groups.

Table & figure (5), show distribution of the studied patients regarding the rheumatoid factor.

Table & figure (6), show distribution of the studied patients regarding the presence of subcutaneous nodules.

Table & figure (7), comparison between level of G-CSF in the serum and synovial fluid according to R.F.

Table (8), comparison between level of G-CSF in the serum and synovial fluid according to R.F. positive patients.

Table (9)& figure (8), comparison between level of G-CSF in the serum and synovial fluid according to the presence of subcutaneous nodules

Table (10)& figure (9), show comparison among patients according to different grades of radiological knee joint changes.

Table (11)& figure (10), show comparison among patients with different grades of the disease activity score(DAS28).

Table (12) & figure (11), show comparison among patients with different grades of functional capacity regarding synovial and serum G-CSF.

Table (13), show correlation between synovial fluid G-CSF and duration of disease, morning stiffness, visual analogue scale, Ritchie articular index, X-ray grade of the knee, functional capacity, activity index, E.S.R. 1st hour, hemoglobin and R.F.

Table (14), show correlation between serum level of G-CSF and all other studied parameters.

Table (15), show comparison among patients with different medication regarding synovial and serum G-CSF.

At the time of the study, all patients were taking treatment for RA. all patients were taking non-steroid ant-inflammatory drugs (NSAIDs).and also disease modifying ant-rheumatic drug (DMARDs) 12 patients were taking Methotrexate I M 10-15 mg per week + prednisolone 5m-10mg per day, 10 patients were taking Methotrexate I M 10-15 mg per week + hydroxychloroquine 200mg per day , and 8 patients were taking Leflunomide 20mg per day + hydroxychloroquine200mg per day.

Table (1): Comparison between the studied groups regarding age in years

Age Studied groups	Mean value		Range	
	(\bar{X})	± S.D.	Minimum	Maximum
Patients (n=30)	47.17	±12.8	28.0	75.0
Control (n=20)	47.60	±10.92	30.0	69.0
T	0.1284		Non significant	
P	> 0.05			

A non significant difference was observed between both groups.

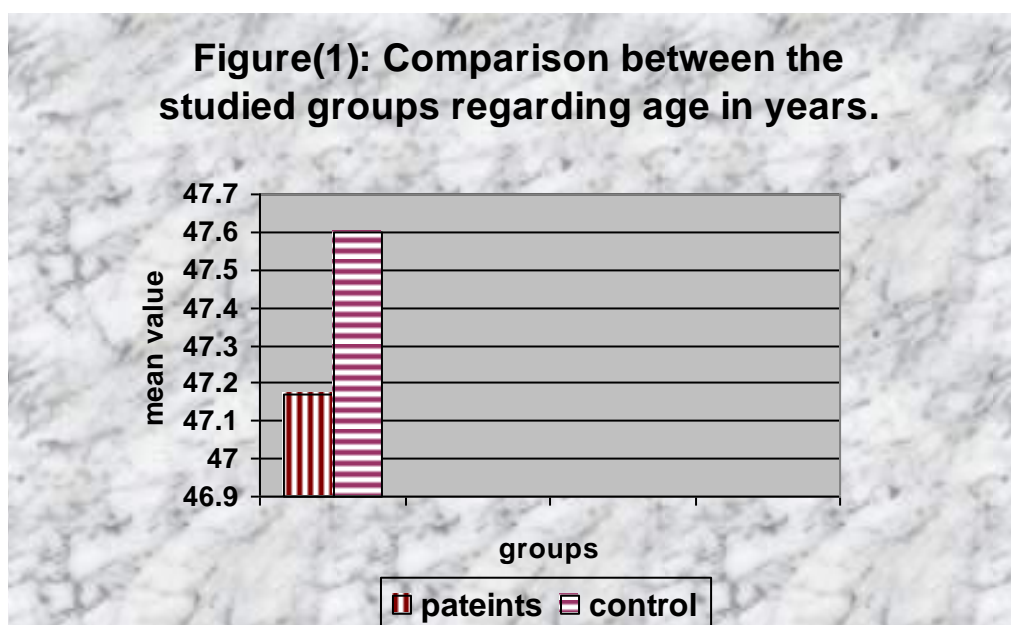


Table (2): Sex distribution of the studied groups.

Sex distribution Studied groups	Males		Females		Total	
	No.	%	No.	%	No.	%
Patients	5	16.7	25	83.3	30	100.0
Control	4	20.0	16	80.0	20	100.0
Total	9	18.0	41	82.0	50	

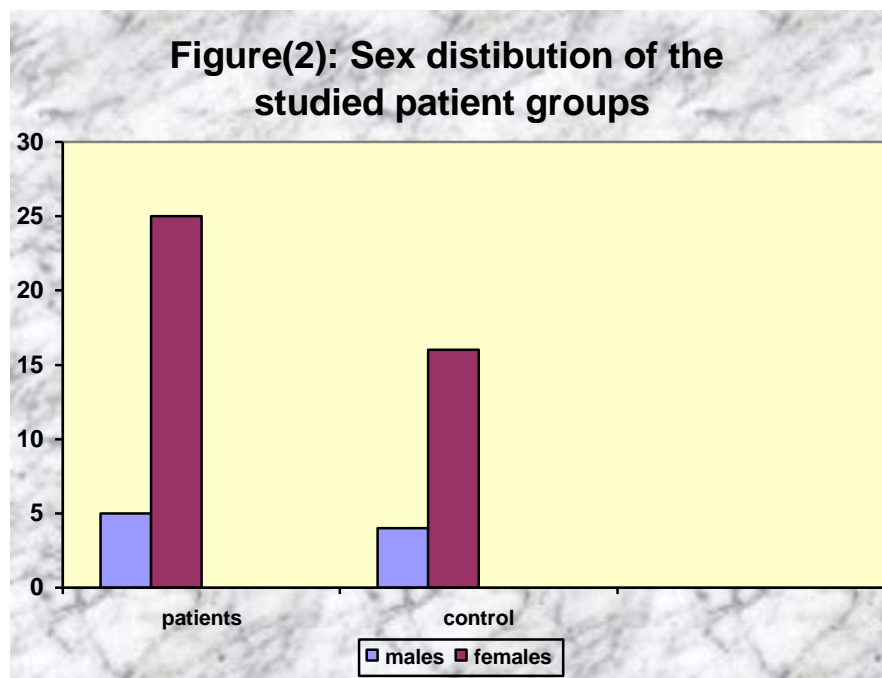


Table (3): Mean value, SD and range of different parameters among our patients.

<i>Value</i> <i>Parameters</i>	<i>Mean value</i> (\bar{X})	$\pm S.D.$	<i>Range</i>	
Duration of disease (years)	7.57	± 5.03	1.0	20.0
Morning stiffness (minutes)	57.4	± 35.0	10.0	130.0
visual scale analogue(mm)	5.36	± 1.63	2.0	8.0
Ritchie articular index	26.27	± 13.61	4.0	50.0

Figure(3): Mean value, S.D, range of different parameters among our groups

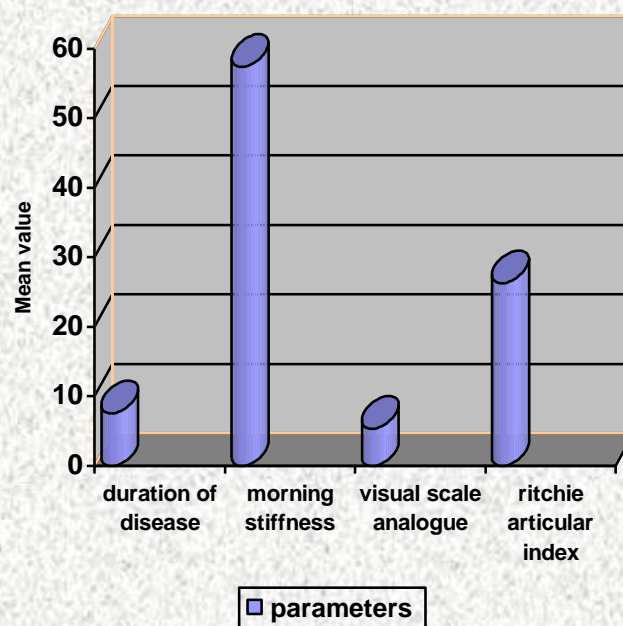


Table (4): Comparison between patients and controls regarding synovial and serum G-CSF

<i>Studied groups</i>	<i>Mean value (\bar{X}) \pm S.D patients</i>	<i>Mean value (\bar{X}) \pm S.D controls</i>	<i>Range</i>
G-CSF			
Synovial G-CSF	1.36 \pm 0.69	0.47 \pm 0.07	5.721
Serum G-CSF	0.875 \pm 0.531	0.47 \pm 0.04	3.357

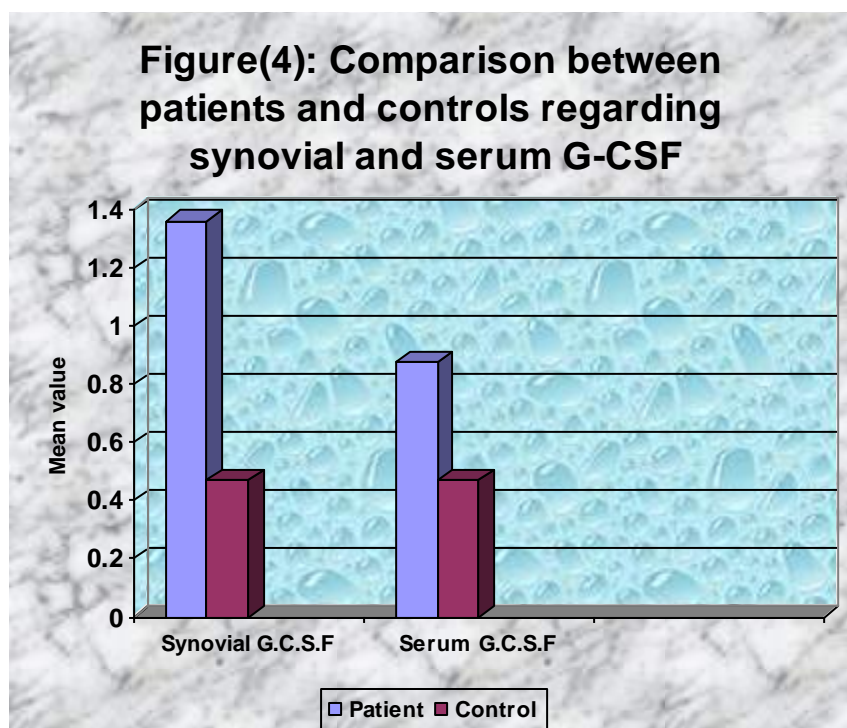


Table (5): Distribution of the studied patients regarding R.F.

<i>Studied patients</i> <i>R.F.</i>	<i>No.</i>	<i>%</i>
Positive	24	80%
Negative	6	20%
Total	30	100.0

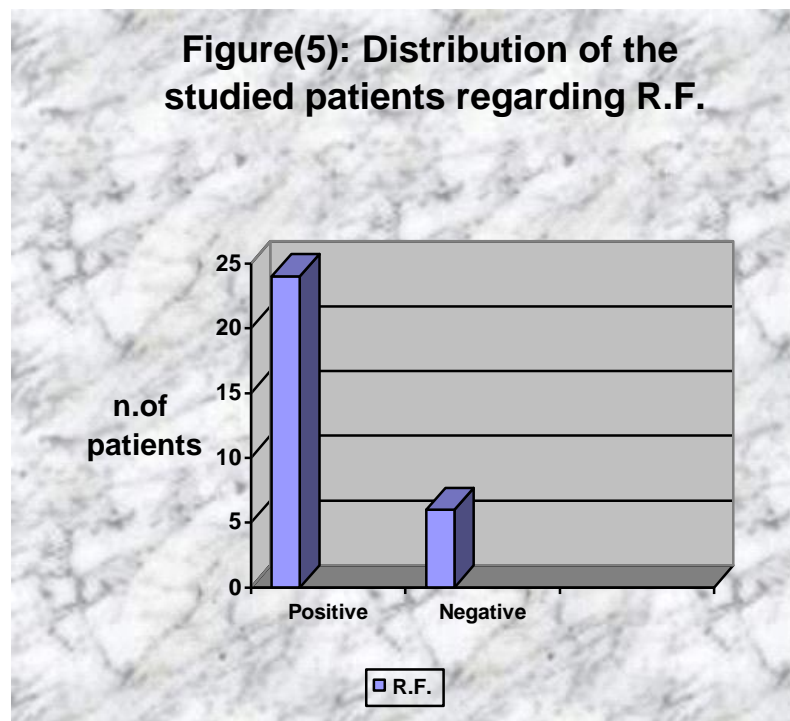


Table (6): Distribution of the studied patients regarding the presence of subcutaneous nodules:

<i>Studied patients</i> <i>Subcutaneous nodules</i>	<i>No.</i>	<i>%</i>
Present	12	40.0
Absent	18	60.0
Total	30	100.0

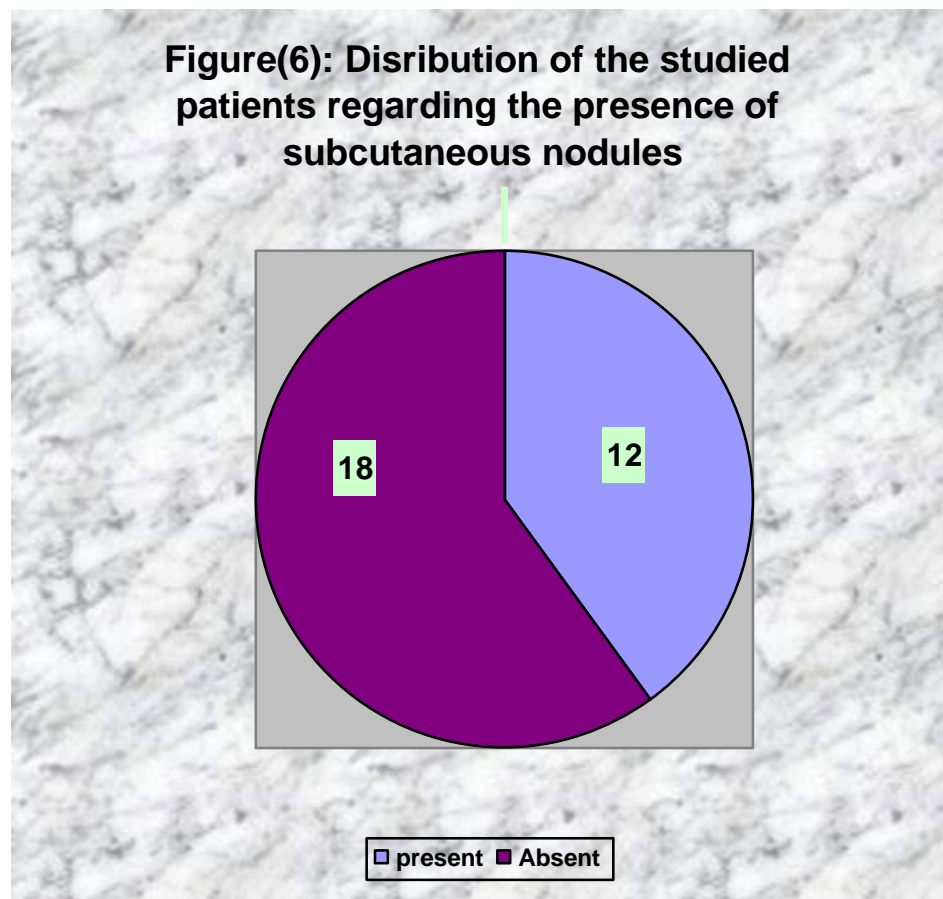


Table (7): Comparison between level of G-CSF in the serum and synovial fluid according to R.F

<i>R. F.</i> <i>G-CSF</i>	<i>Positive</i> (<i>n = 24</i>)	<i>Negative</i> (<i>n=6</i>)	<i>T</i>	<i>P</i>
	$\bar{X} \pm \text{S.D.}$	$\bar{X} \pm \text{S.D.}$		
Syn. GCSF(pg/ml)	1.486 \pm 0.694	0.879 \pm 0.456	2.019	< 0.05
Serum GCSF(pg/ml)	0.958 \pm 0.557	0.544 \pm 0.210	1.990	< 0.05

Table (8): Comparison between level of G-CSF in the serum and synovial fluid according to R.F positive patients]

<i>R.F</i> <i>G-CSF</i>	Synovial GCSF(pg/ml)	Serum GCSF(pg/ml)
Positive ($\bar{X} \pm \text{S.D.}$)	1.486 \pm 0.694	0.958 \pm 0.557
P	<0.05	

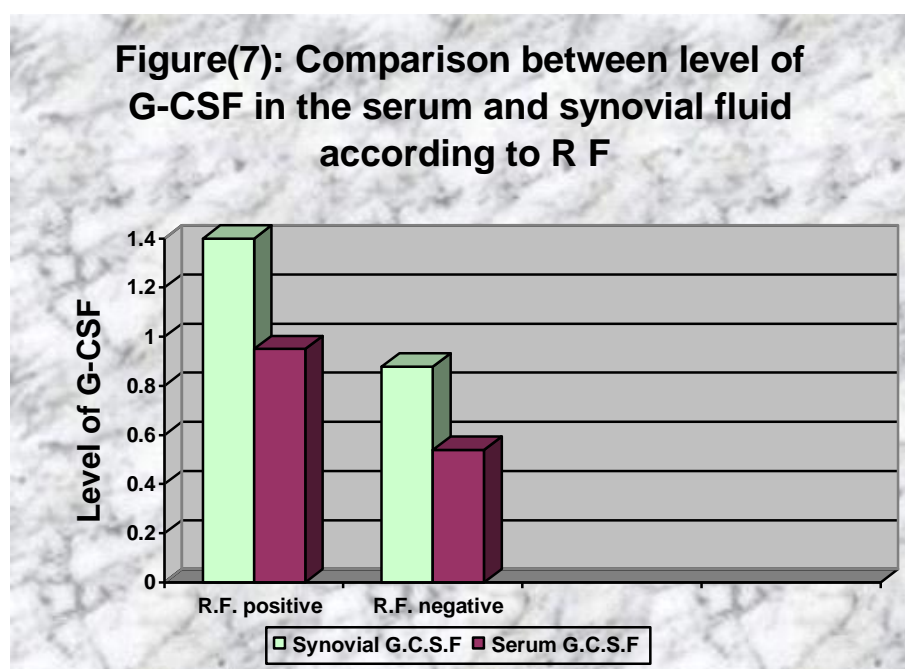


Table (9): Comparison between level of G-CSF in the serum and synovial fluid according to presence of subcutaneous nodules.

<i>Sub. Nod.</i> <i>G-CSF</i>	<i>Present</i> <i>(n = 12)</i>	<i>Absent</i> <i>(n=18)</i>	<i>T</i>	<i>p</i>
	$\bar{X} \pm \text{S.D.}$	$\bar{X} \pm \text{S.D.}$		
Syn. GCSF(pg/ml)	1.974 \pm 0.427	0.959 \pm 0.513	5.673	< 0.01
Serum GCSF(pg/ml)	1.320 \pm 0.493	0.579 \pm 0.301	5.1259	< 0.01

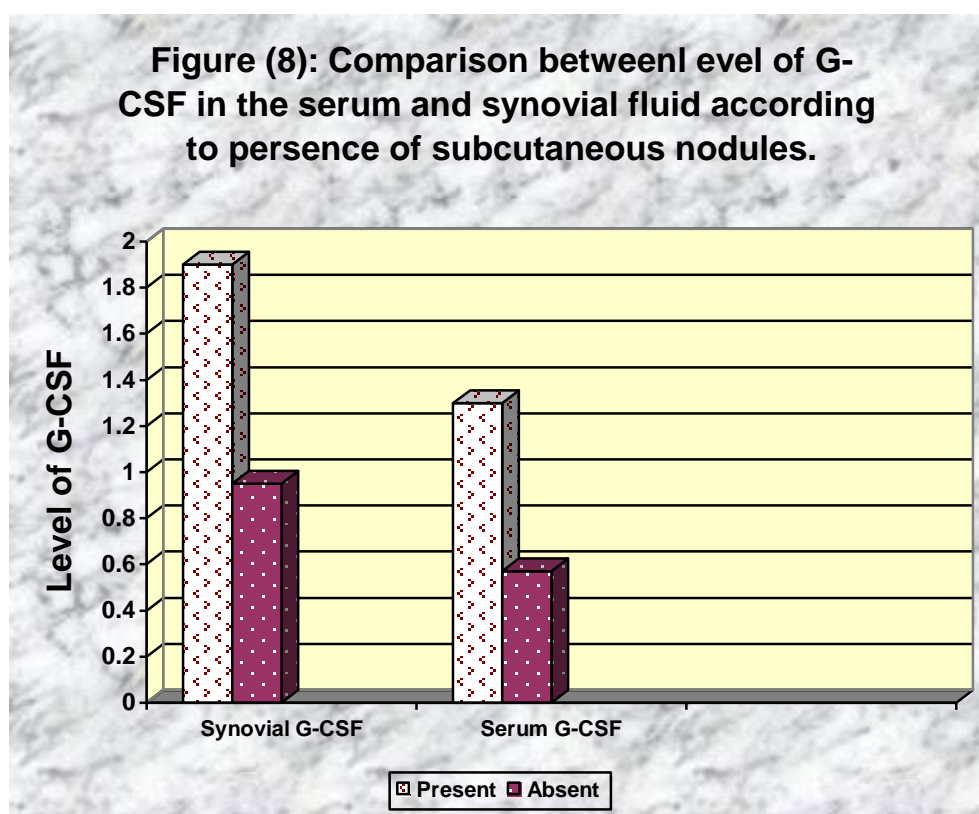


Table (10): Comparison among patients according to different grades of radiological knee joint changes.

<i>Grade of X ray</i>	<i>I</i> (N=8)	<i>II</i> (N=7)	<i>III</i> (N=6)	<i>IV</i> (N=9)	<i>F</i>	<i>p</i>
<i>G-CSF</i>	$\bar{X} \pm \text{S.D.}$	$\bar{X} \pm \text{S.D.}$	$\bar{X} \pm \text{S.D.}$	$\bar{X} \pm \text{S.D.}$		
Syn. GCSF	1.159±0.827	0.941±0.622	1.762±0.701	1.762±0.701	2.475	>0.05
Serum GCSF	0.757±0.489	0.550±0.422	1.163±0.699	1.042±0.415	2.106	>0.05

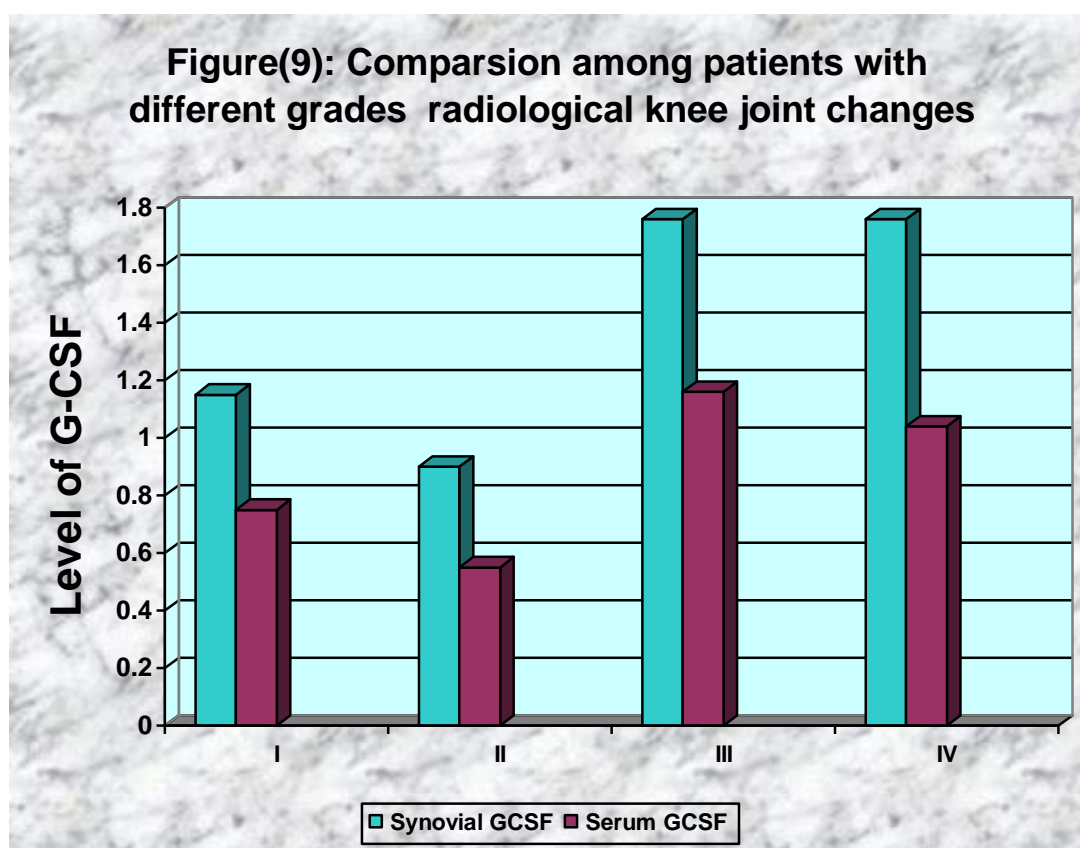


Table (11): Comparison among patients with different grades of activity index

<i>Grade of act. Ind.</i> <i>G-CSF</i>	<i>Low activity</i> (N=9)	<i>Moderate activity</i> (N=11)	<i>High activity</i> (N=10)	<i>F</i>	<i>p</i>
	$\bar{X} \pm \text{S.D.}$	$\bar{X} \pm \text{S.D.}$	$\bar{X} \pm \text{S.D.}$		
Syn. GCSF	0.773 \pm 0.455	1.384 \pm 0.725	1.876 \pm 0.366	9.602	< 0.01
Serum GCSF	0.418 \pm 0.215	1.004 \pm 0.565	1.146 \pm 0.448	7.020	< 0.01

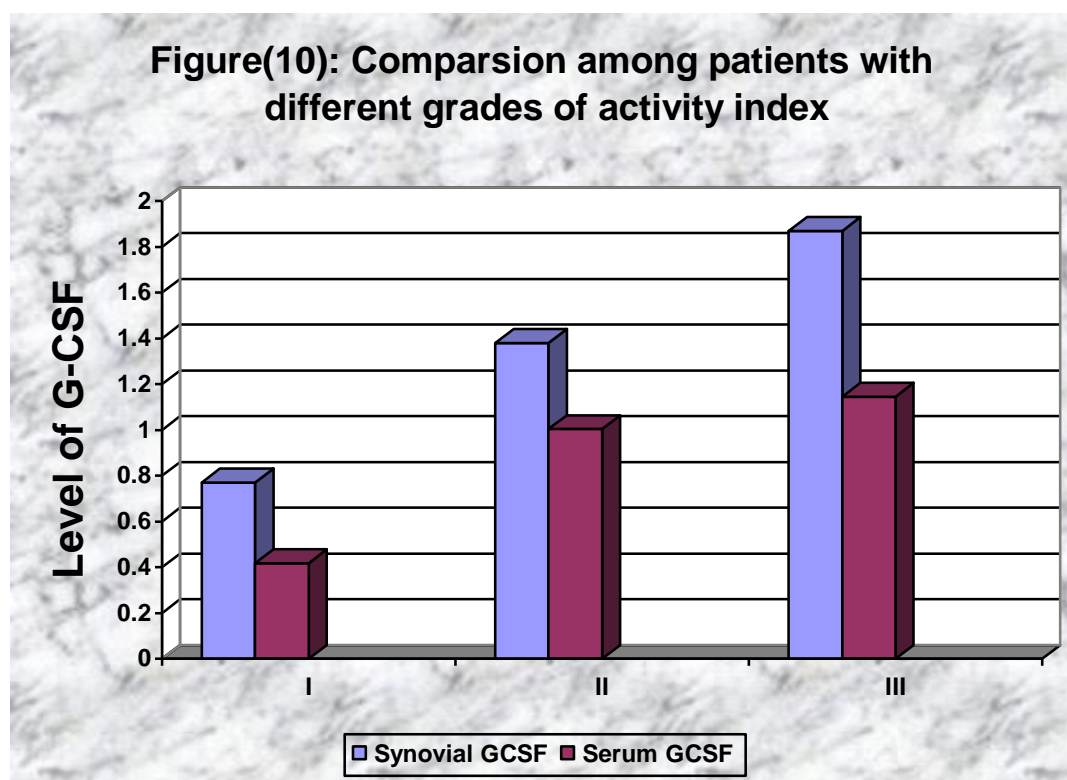


Table (12): Comparison among patients with different grades of functional capacity regarding syn. & serum G-CSF

<i>Gr. Fun. Cap.</i> <i>G-CSF</i>	<i>I</i> (<i>N</i> =7)	<i>II</i> (<i>N</i> =8)	<i>III</i> (<i>N</i> =15)	<i>f</i>	<i>p</i>
	$\bar{X} \pm \text{S.D.}$	$\bar{X} \pm \text{S.D.}$	$\bar{X} \pm \text{S.D.}$		
Syn. G-CSF	0.626±0. 63	1.266±0.782	1.762±0.428	11.081	< 0.01
Serum G-CSF	0.377±0. 47	0.798±0.523	1.149±0.479	7.462	< 0.01

Figure(11): Comparson among patients with different grades of functional capacity regarding syn. & serum GCSF

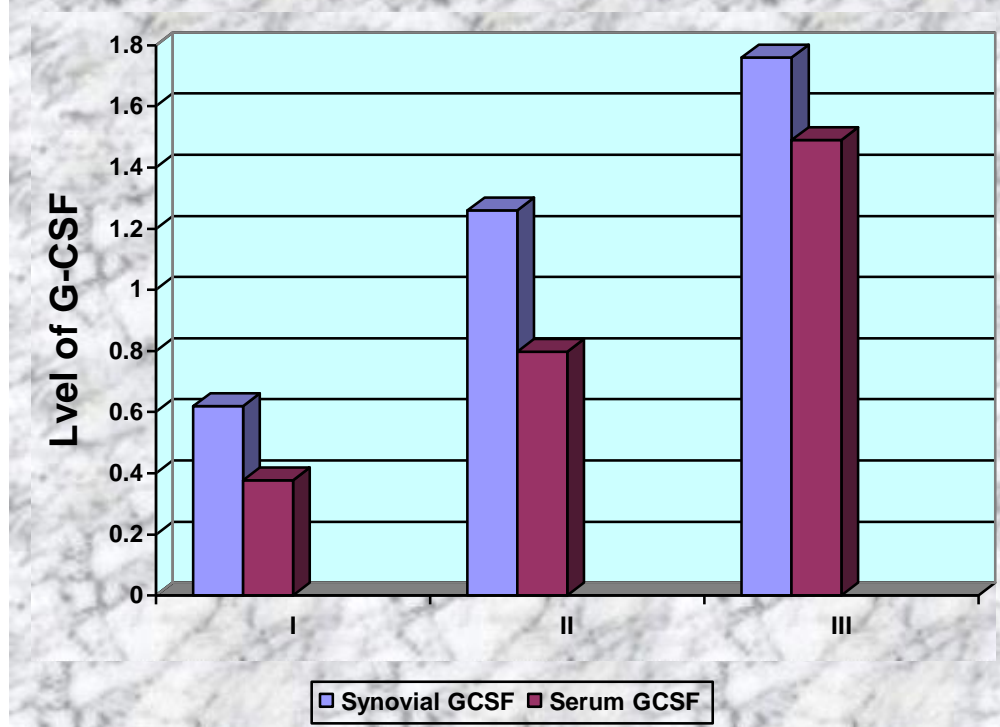


Table (13): Correlations between synovial fluid G-CSF and other clinical and laboratory parameters

<i>Clinical & laboratory parameters</i>	<i>Synovial G-CSF</i>	
	<i>R</i>	<i>p</i>
Duration of disease (years)	+ 0.055	> 0.05 N.S.
Morning stiffness (minutes)	+ 0.741	< 0.01 H.S.
Visual analogue scale (m.m)	+0.477	< 0.05 S
Ritchie articular index	+0.671	< 0.01 H.S.
radiological grade of knee	+0.335	> 0.05 N.S.
Function capacity	+0.623	< 0.01 H.S.
Activity index	+0.643	< 0.01 H.S.
E.SR 1 st hour (mn/h)	+0.844	< 0.01 H.S.
Hemoglobin (gm/dl)	-0.624	< 0.01 H.S.

Table (14): Correlation between serum level of G-CSF and all other studied parameters

<i>Parameters</i>	<i>Serum</i>	
	<i>R</i>	<i>p</i>
Duration of disease (years)	+ 0.004	> 0.05 N.S.
Morning stiffness (minutes)	+ 0.730	< 0.01 H.S.
Visual analogue scale (m.m)	+0.487	< 0.05 H.S.
Ritchie articular index	+0.607	< 0.01 H.S.
radiological grade of knee joint	+0.261	> 0.05 N.S.
Functional capacity	+0.564	< 0.01 H.S.
Activity index	+0.548	< 0.01 H.S.
E.SR 1 st hour	+0.793	< 0.01 H.S.
Hemoglobin (gm/dl)	-0.559	< 0.01 H.S.
Synovial fluid G.C.S.F.	+ 0.897	< 0.01H.S.

Table (15): Comparison among patients with different medication regarding synovial& serum G-CSF

<i>Diff. , med.</i> <i>Parameter</i>	<i>Methotrexate+ prednisolone (n12)</i>	<i>Methotrexate + prednisolone (n10)</i>	<i>Leflunomide + hydroxychlor oquine (n8)</i>	<i>F</i>	<i>p</i>
	$\bar{X} \pm \text{S.D.}$	$\bar{X} \pm \text{S.D.}$	$\bar{X} \pm \text{S.D.}$		
Synovial G-CSF	0.81±0.42	1.77±0.39	0.70±0.40	.08	>0.05
Serum G-CSF	1.4±0.68	1.2±0.59	1.1±0.61	1.1	> 0.05