

# Results

## **RESULTS**

### **1- Rheumatoid arthritis group:**

This group was classified into two subgroups: group A: adult onset RA (sixteen patients) and group B: Juvenile onset RA (fourteen patients).

#### **Group A: (table 1)**

- This group included 14 female (87.5%) and 2 males (12.5%).
- Their ages ranged from 20 years to 61 years with mean of 49.1 years.
- The disease duration ranged from 3 to 20 years with a mean of 9.5 years.
- The duration of morning stiffness ranged from 0 to 120 minutes with a mean of 20 minutes.
- The pain score, using the visual analogue scale, ranged between 0.8 – 2.8cm with a mean of  $1.8\text{cm} \pm 0.6$ .
- Articular index scoring ranged between 4-24 with a mean of 16.

#### **As regards the laboratory finding:**

- Haemoglobin concentration ranged from 8.9 – 13.3gm% with a mean of 11.1 gm.
- E.S.R. level ranged from 10 to 145 with a mean of 47.5.
- Rheumatoid factor was positive in 13 cases (81.3%) negative in 3 cases (17.7).
- Disease activity index ranged from 2.2 – 3.8 with mean of 2.8.

**In table (2):**

- Various degree of valve lesions are detected in 62.5 cases  
mitral regurge is detected in 8 cases, mitral valve thickness in 8 cases, aortic regurge in 3 cases and pericardial lesion in one case (thickness or effusion).

**In table (3):**

- This table shows that there were significant correlations between echocardiographic findings and pain scale and functional capacity while shows non significant correlation with other parameters.

**Group B : (table 4)**

- This group include 14 cases 10 males (71%) and 4 females (29%).
- In table (4) the patients ages ranged between 3 to 18 years with a mean of 10 years with disease duration between 0.2 to 8 years with a mean of 2.5, neither lymph node nor splenic enlargement were detected in our cases.
- As regards the laboratory parameters in our cases ESR was between 25 to 60 in the first hour with a mean of 35. Hb ranged between 10 and 13 gm% with a mean of 11.9 gm%.
- R.F. was positive in 2 cases and ANA positive in 3 cases.

**In table (5):**

Cardiac lesions were found in 7 cases. Mitral valve thickness was detected in one case.

- Mitral regurge was detected in one case.

- Mitral valve prolapse was detected in 3 cases, Aortic regurge in two cases, pericardial lesions in 4 cases and left ventricular hypertrophy in 2 cases.

**In table (6):**

This table shows that there was significant correlation between echocardiographic findings in patients with JRA and their ages, disease duration and pain score with non significant correlation between echorcardiographic finding and other parameters.

**Table (1):** Demographic, Clinical and Laboratory Data In  
Rheumatoid arthritis group (n = 16)

<b>Lesions</b>	<b>Median "N"</b>	<b>range</b>
Age (y)	49.5	(20 – 61)
Sex (Females)	14	(87.5%)
Disease duration (y)	9.5	(3 – 20)
Morning stiffness (min)	20	(0 – 120)
Nodules	8	(50%)
Pain scale	1.8	(0.8 – 2.8)
Articular index	16	(4-24)
Functional capacity	1.7	(0.9 –2.4 )
Diseases severity	2	(1-4)
Hb. gm /dl	11.1	(8.9 – 13.3)
ESR	47.5	(10 – 145)
R.F. + ve	13	(81.3%)
Dis. Activ. Index.	2.8	(2.2 – 3.8)

**Table (2):** Echocardiographic lesions

<b>Lesions</b>	<b>Distribution "N"</b>
Any lesion	10 (62.5%)
Mitral regurge	8 (50%)
Mitral valve thickness	8 (50%)
Aort. regurge	3 (19%)
Pericard. Lesion	1 (6%)

**Table (3):** Correlation between number of echocardiographic lesions and other variables in patients with Rheumatoid arthritis

Parameter	R2	P	Significance
Age (y)	0.002	0.9	Non significant
Disease duration (y)	0.09	0.3	Non significant
Morning stiffness	0.04	0.5	Non significant
Pain scale	0.044	0.05	Significant
Functional capacity	0.07	0.003	Significant
Diseases severity	0.11	0.2	Non significant
AI	0.08	0.2	Non significant
ESR	0.04	0.5	Non significant
Hb	0.04	0.4	Non significant
Disease activity index	0.0004	0.9	Non significant

**Table (4) :** Demographic, clinical and laboratory data of patient with  
(2) Juvenil rheumatoid arthritis  
(n = 14)

Variable	Median "N" range	
Age (y)	10	(3-18)
Sex (Females)	4	(29%)
Disease duration (y)	2.5	(0.2 -8)
Lymph node or splenic enlargement	0	(0%)
ESR	35	(25 - 60)
Hb (g/dl)	11	(10 - 13)
R.F. +ve	2	(14%)
ANA	3	(21 %)

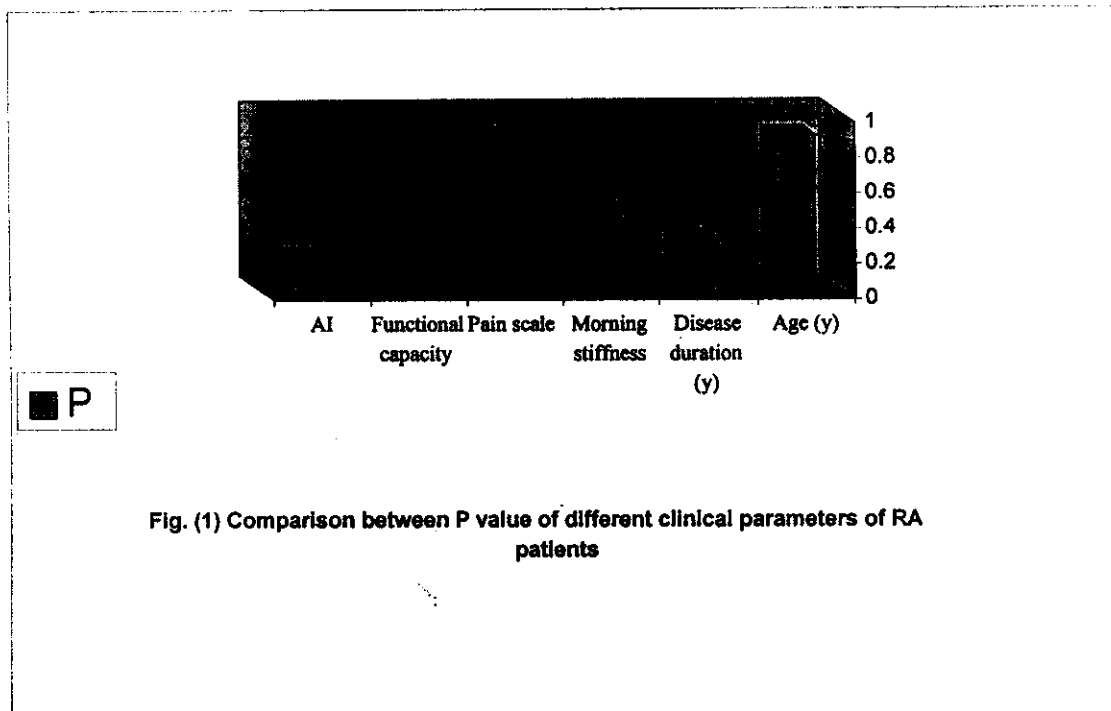
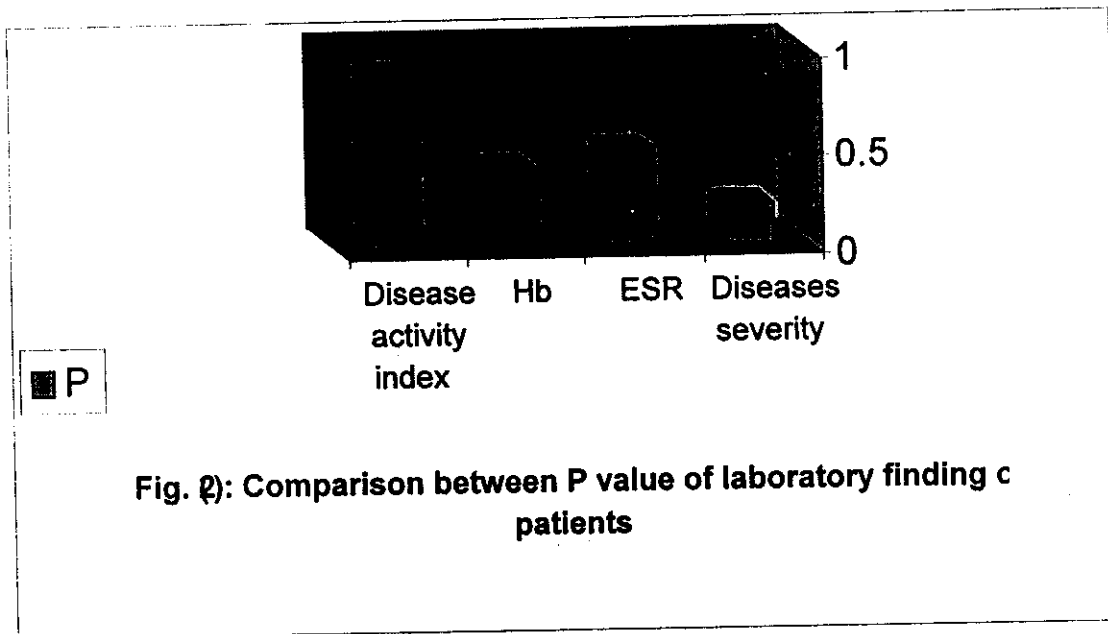


Fig. (1) Comparison between P value of different clinical parameters of RA patients

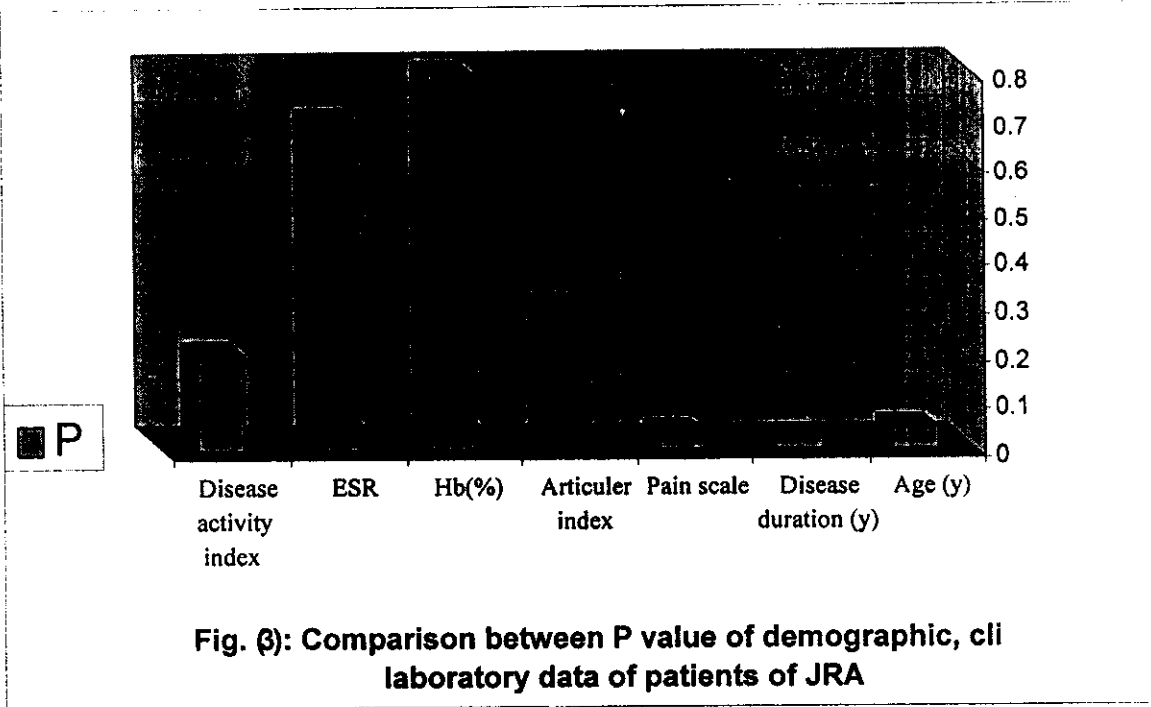


**Table (5) : Echocardiographic lesions in patients with Juvenile rheumatoid arthritis**

<b>Lesions</b>	<b>Distribution "N"</b>
Any lesion	7 (50%)
Mitral valve thickness	1 (7%)
Mitral regurge	1 (7%)
Mitral value prolapse	3 (21%)
Aortic regurge	2 (14%)
Pericardial lesion	4 (28%)
Left ventrical hypertrophy	2 (14%)

**Table (6): Correlations between number of echocardiographic lesions and variables in patients with Juvenile Rheumatoid arthritis.**

<b>Parameter</b>	<b>R2</b>	<b>P</b>	<b>Significance</b>
Age (y)	0.31	0.04	Significant
Disease duration (y)	0.36	0.02	Significant
Pain scale	0.32	0.03	Significant
Articuler index	0.08	0.3	Non significant
Hb(%)	0.004	0.8	Non significant
ESR	0.02	0.7	Non significant
Disease activity index	0.11	0.2	Non significant



**Group of SLE patient :**

**Table (7):** This table shows the following data:

- This group included 19 females (95%) and one male (5%) with their ages ranged between 18 and 40 years with a median of 27.5 years.
- Their disease duration was between 5 and 15 years with a median of 3.5 years.
- Oral ulcers were found in 8 cases, serositis in 12 cases. And CNS lesions in 4 cases.
- According to laboratory findings ESR was between 30-100 with a median of 45.
- Nephritis was found in 8 cases.
- Hb was between 9-12 with a median of 10 gm/dl : ANA was positive in all cases and anti DNA was positive in 14 cases (70%).

**Table (8):** This table show that:

- SLEDAI among patients with SLE disease.
- There were 6 (30%) patients with mild grade of SLEDAI their scores were between 5 & 15.
- There were 10 (50%) patients with moderate grade of SLEDAI their scores were between 10 & 20.
- There were 4 (20%) patients with severe grade of SLEDAI their scores were between 20 & 45.
- There were no one with very severe grade of SLEDAI.

**Table (9): This table shows that:**

- Different types of cardiac involvement were present in 16 cases, mitral valve thickness increased in 8 case, mitral valve vegetations in 6 cases and mitral regurge in two case.
- Aortic regurge was found in 4 cases, thickened Aortic valve was found in 6 cases, Aortic vegetations were found in two cases.
- Pericardial lesions were found in 4 cases. Left ventricular hypertrophy was found in two cases.
- SLEDAI according to modification in rheumatology conference 1985 was between 5-45 with a median of 20.

**Table (10): This table shows that:**

- There was significant correlation between echocardiographic findings in patients with SLE and age of patients and disease duration was non significance with other parameters.
- There was no significant correlation with E.S.R, Hb% a nor SLEDAI.

**Table (7): Demographic, clinical and laboratory data of patients with SLE**  
(N = 20)

<b>Variable</b>	<b>Median "N" range</b>	
Age (y)	27.5	(18 – 40)
Sex (females)	19	(95%)
Disease duration (y)	3.5	(0.5 – 15)
Nephritis	8	(40%)
Oral ulcers	8	(40%)
Serositis	12	(60%)
CNS lesions	4	(20%)
Fever	16	(80%)
ESR	45	(30 – 100)
Hb(g/dl)	10	(9 – 12)
Leucopenia	4	(20%)
Thrombocytopenia	8	(40%)
Positive ANA	20	(100%)
Positive Anti <sub>ds</sub> DNA	14	(70%)
Low complement	16	(80%)
SLEDAI	20	(5-45)

**Table (8): SLEDAI among patients of SLE**

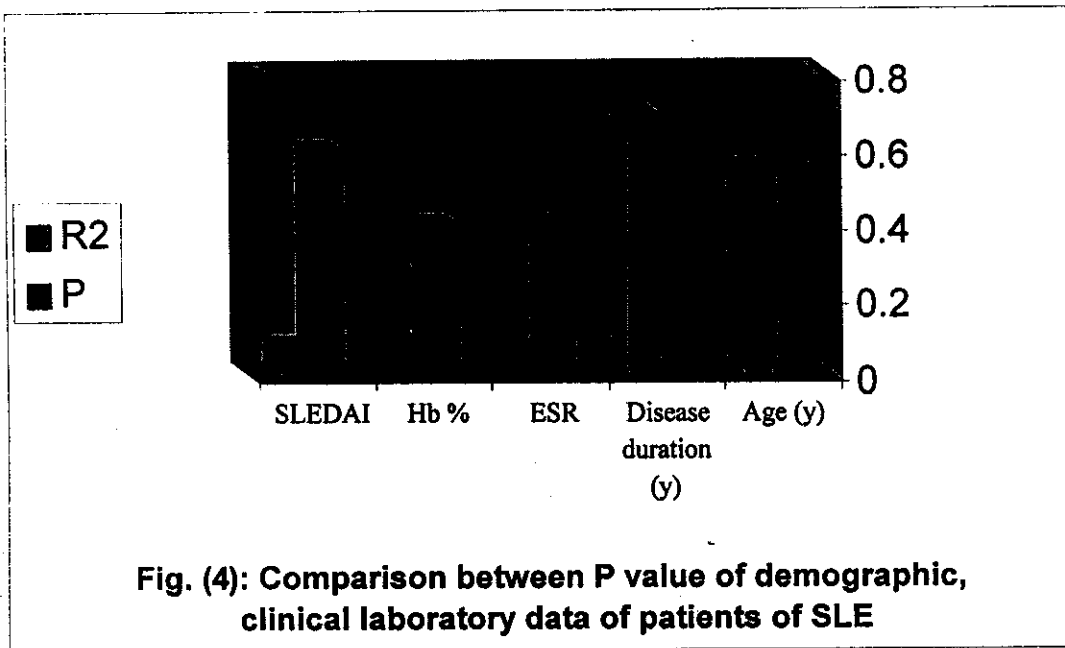
	<b>Mild n = 6</b>	<b>Moderate n = 10</b>	<b>Severe n = 4</b>
Median	3.5	12	27.5
Minimum	5	10	20
Maximum	15	20	45
P value	0.6		
Significance	Non significant		

**Table (9): Echocardiographic lesions in patients with SLE**

<b>Variable</b>	<b>Distribution</b>
Any lesion	16 (80%)
MV thickness	8 (40%)
MV vegetation	1 (5%)
MR	2 (10%)
Aort. Regurge	4 (20%)
Thick Aort. Valve	6 (30%)
Aort. vegetation	1 (5%)
Pericardial Lesion	4 (20%)
LVH	2 (10%)

**Table (10): Correlation between number of echocardiographic lesions and parameters of patients with SLE**

<b>Parameter</b>	<b>R2</b>	<b>P</b>	<b>Significances</b>
Age (y)	0.55	0.006	Significant
Disease duration (y)	0.7	0.0007	Significant
ESR	0.07	0.4	Non significant
Hb %	0.09	0.4	Non significant
SLEDAI	0.08	0.6	Non significant



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## **SYSTEMIC SCLEROSIS GROUP**

**Table (11):**

- In this group there were 6 patients all of them were females.
- Their ages ranged between 18 to 55 with a man of 40 year. The disease duration were between 5 to 10 years with a mean of 4 year.
- Clinically proximal sclerosis was found in 5 (83%) cases, dysphagia was in all cases all of them (100%). According to laboratory findings ESR was between 25 and 60 with a mean of 37. Hb % was from 8 to 11 with a mean of 10.5 gm/dl %. Total protein in 24 hours urine found within normal values.

**Table (12):**

- Different types of cardiac involvement were found in 5 (83%) cases. Mitral regurge was found in one case, tricuspid regurge was found in 2 (33%) cases and pulmonary hypertension was found in 4 (66%) cases.
- Right ventricular filling defect was found in 4 (66%) cases.

**Table (13):**

- This table shows significant correlation between echocardiographic findings and age of the patients and so disease duration with no significant correlation with other parameters.

**Table (11):** Demographic, clinical and laboratory data of patients  
with SS (n = 6)

Variable	Median "N" range	
Age (y)	40	(18 – 55)
Sex (Females)	6	(100%)
Disease duration (y)	4	(0.5 – 10)
Proximal sclerosis	5	(83%)
Dysphagia	6	(100%)
ESR	37	(25 – 60)
Hb (g/dl)	10.5	(8 – 11)
Protein in urine	0	(0%)

**Table (12):** Echo lesions in patients with systemic sclerosis

Variable	Distribution "N"
Any lesion	5 (83%)
MR	1 (17%)
TR	2 (33%)
Pulmonary hypertension	4 (67%)
Rt. Ventricular filling defect	4 (67%)

**Table (13):** Correlation between number of patients with scleroderma  
and variables of scleroderma

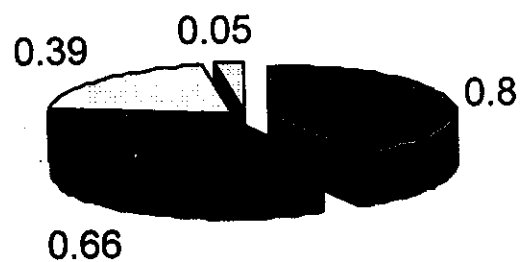
Parameter	R2	P	Significances
Age (y)	0.8	0.01	Non significant
Disease duration (y)	0.66	0.05	Non significant
ESR	0.39	0.2	Non significant
Hb	0.05	0.7	Non significant

■ Age (y)

■ Disease duration (y)

□ ESR

□ Hb



**Fig. (5): Comparison between P value of different demographic clinical laboratory data of SSC**

**Group of dermatomyositis (Table 14).**

- This group included 4 patients who were females.
- Their ages ranged between 18 to 40 years with a median of 29.5 years  
disease durations were between 1 and 5 years with a median of 2 years.
- ESR was between 50 – 100 with a median of 72, Hb was between 10-12gm/dl with a mean of 11 gm/dl.
- CPK was between 100 and 4000 unit/ liter with a median of 400 unit/liter.
- EMG and muscle biopsy were diagnostic in all cases.
- No cardiac involvement was found in both cases.

**Table (15):**

- This table shows that no cardiac involvement was detected in any case.

Variable	Median "N" range	
Age (y)	29.5	(18 – 40)
Sex (Females)	4	(100%)
Disease duration (y)	2	(1 – 5)
ESR	72	(50 – 100)
Hb (g/dl)	11	(10 – 12)
CPK	400	(100 – 4000)
EMG	4	(100%)
Muscle biopsy	4	(100%)

**Table (14):** Demographic, clinical and laboratory data in patients with dermatomyositis . (n = 4)

**Table (15):** Echocardiographic lesion

Variable	Distribution "N"
Any lesion	0 (0%)

**Table (16):** Demographic, clinical and laboratory data in Sj'gren's syndrome group n=6

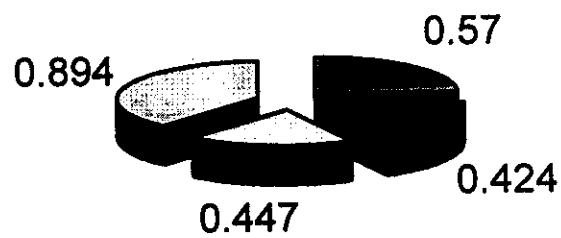
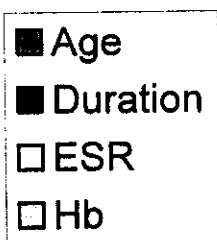
Data	Median	range
Sex female	66.6%	4
Age	35	25-50
Duration	2	0.5-3
ESR	30	20-45
Hb	10.5	10-12
ANA +ve	50%	3
RF +ve	50%	3

**Table (17):** Echocardiographic lesion

Lesions	Distribution
Pericardial lesion	1(16.6%)
Pulmonary hypertension	2(33%)

**Table (18):** Correlation between echocardiographic lesions and variables in patients with sjogren's syndrome

Parameter	P	Significance
Age	0.57	Non significant
Duration	0.424	Non significant
ESR	0.447	Non significant
Hb	0.894	Non significant



**Fig. (6): Coparison between P value of Sjogern's syndrome patients variables**

**Table (16):**

Group of Sj'gren's syndrome:

- This group included 4 females (66.6%) and 2 males (33.3%).
- This ages ranged between 25 and 50 years with a median of 35 years.
- Their disease durations ranged between 0.5 and 3 years with a median of 2 years.
- Their Hb concentrations were between 10 and 12gm/dL with a median of 10.5 gm/dL.
- Their ESR was between 20 and 45 mm in 1<sup>st</sup> hour with a median of 30 mm.
- R.F was + ve in 50% of cases.
- ANA was + ve in 50% of cases.

**Table (17):**

- This table shows that echocardiographic finding abnormality in 50% of cases Sj'gren's syndrome.
- Pericardial lesion (minimal effusion) was found in one case (16.6%).
- Pulmonary hypertension was found in 2 cases 33.3%.

**Table (18):**

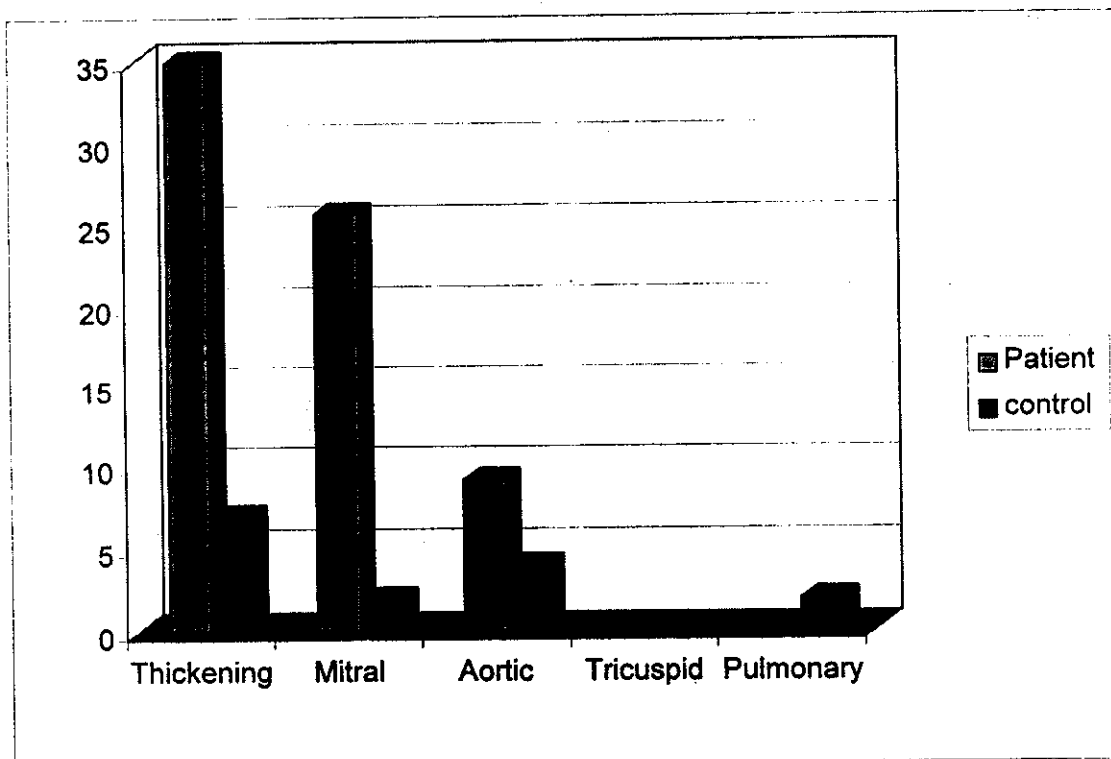
This table shows that: non significant correlation between echocardiographic finding ESR , Hb, age or disease durations.

**Table (19):**

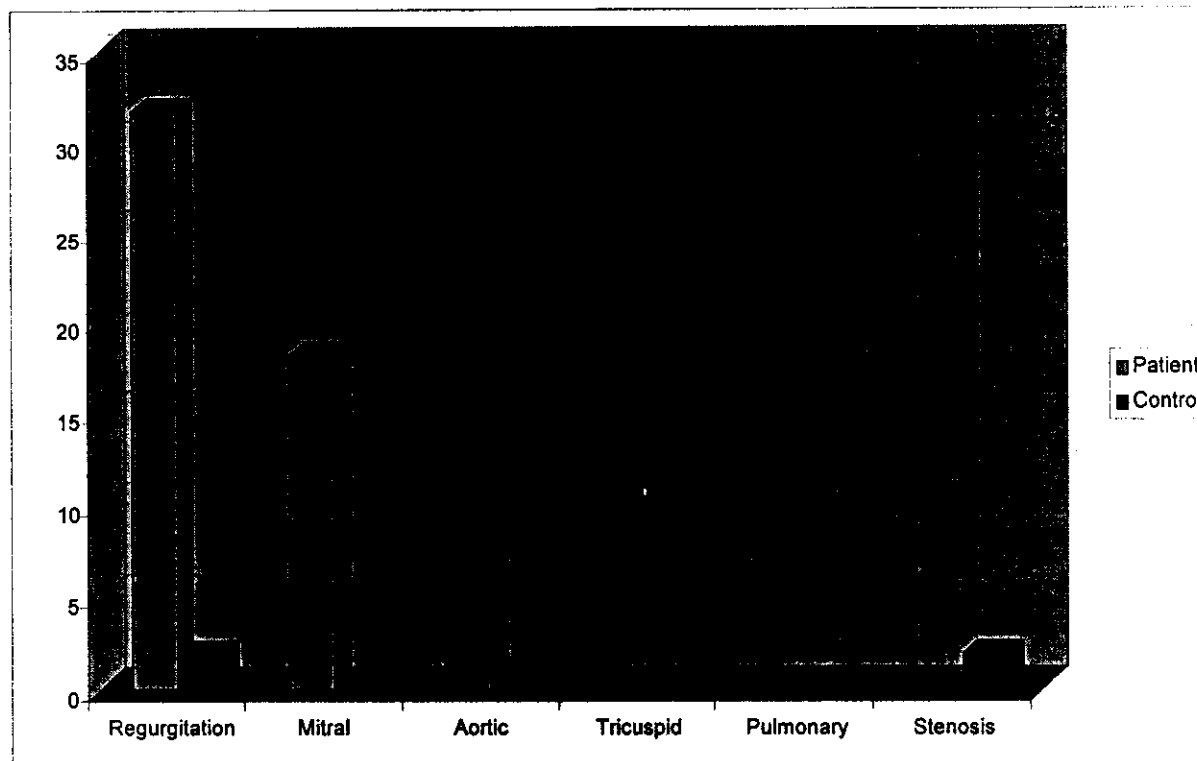
This table shows: comparison between echocardiographic in controls and patients of CTDs.

**Table (19): Comparison between echoerdicgraphic findings in patients with C.T disease and controls**

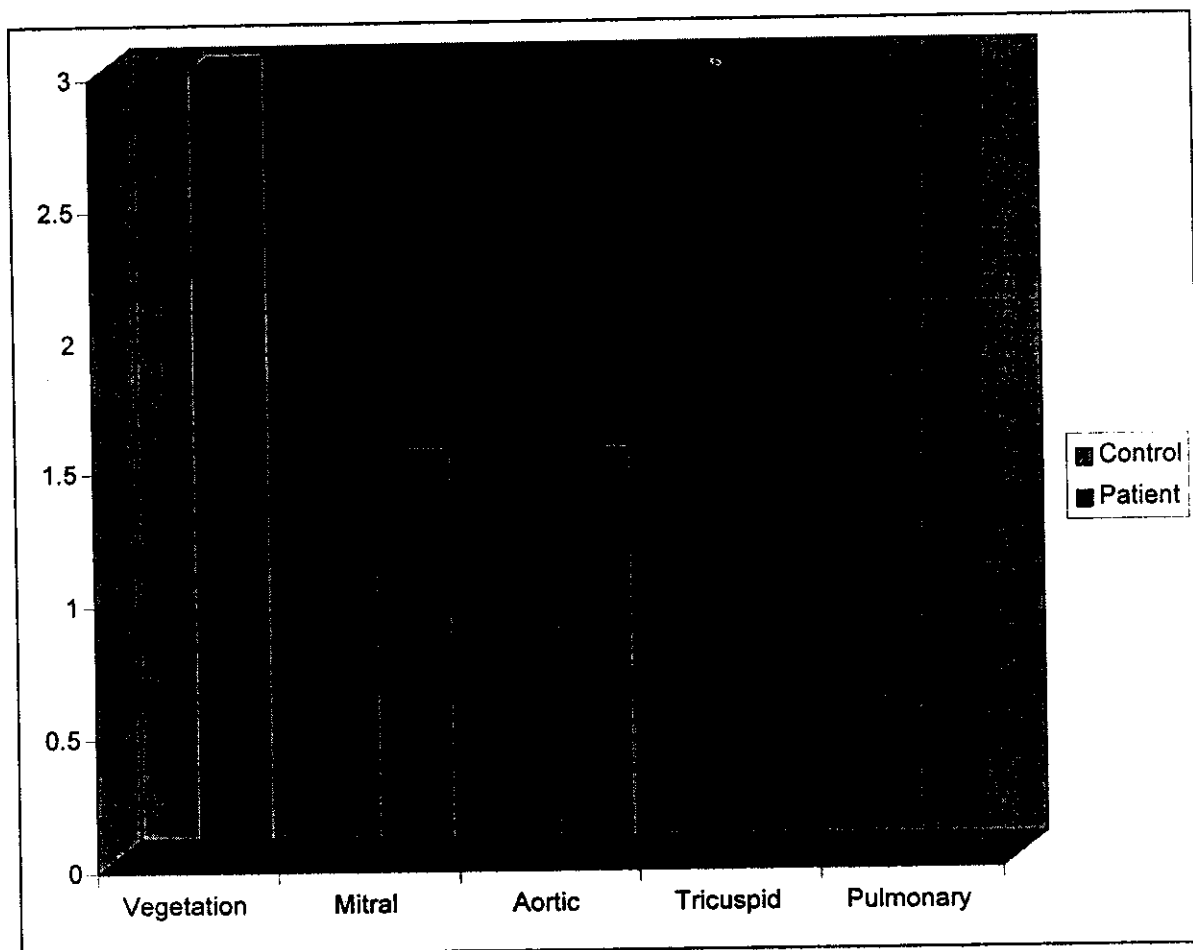
Valvular abnormality	Patients n= 66		Control n= 56	
	n	%	n	%
Thickening	23	34.9	4	7
Mitral	17	25.6	1	2
Aortic	6	9.1	2	4
Tricuspid	0	0	0	0
Pulmonary	0	0	1	2
Vegetation	2	3	0	0
Mitral	1	1.5	0	0
Aortic	1	1.5	0	0
Tricuspid	0	0	0	0
Pulmonary	0	0	0	0
Regurgitation	21	31.8	1	2
Mitral	12	18.2	0	0
Aortic	9	13.6	1	0
Tricuspid	0	0	0	0
Pulmonary	0	0	0	0
Stenosis	0	0	1	2



**Fig. (1): Comparison between echocardiographic valves thickenings in patients and control**



**Fig. (2): Comparison between echocardiographic valves regurgitaions in patients and control**



**Fig. (3) Comparison between echocardiographic valves vegetations in patients and control**