RESULTS

Results of the present study are shown in the following tables and figures:

Table (8): Demographic characteristics of the studied patients

	G I (Atopic) (n=10)	G II (Non-atopic) (n=10)	G III (Controls) (n=10)	One Way ANOVA	
				F	**p**
Age (Years)	9.0 ± 2.9	7.4 ± 3.06	8.3 ± 3.3	1.66	0.03
Weight (kg)	30.0 ± 13.3	35.5 ± 13.5	28.0 ± 10.5	0.97	0.39
Height (m)	1.21 ± 0.17	1.32 ± 0.19	1.28 ± 0.19	0.93	0.41
BMI (kg/m^2)	19.36 ± 3.14	19.6 ± 3.64	16.4 ± 2.121	3.4	0.048
				Chi-square Test	
				X^2	P
Sex Male	5 (50.0 %)	4 (40.0 %)	5 (50.0 %)	0.27	0.88
Female	5 (50.0 %)	6 (60.0 %)	5 (50.0 %)		

This table shows no statistically significant differences among groups regarding weight, height and sex distribution. However, atopic patients had significantly older age than non-atopic patients. Also, asthmatic patients (atopic or non-atopic) had significantly higher BMI than control group.
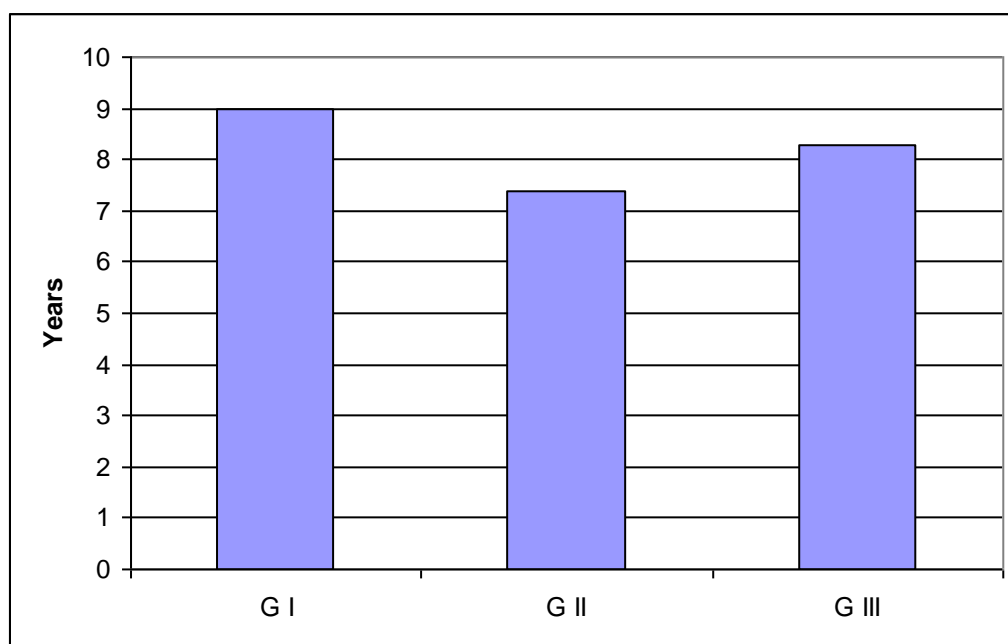
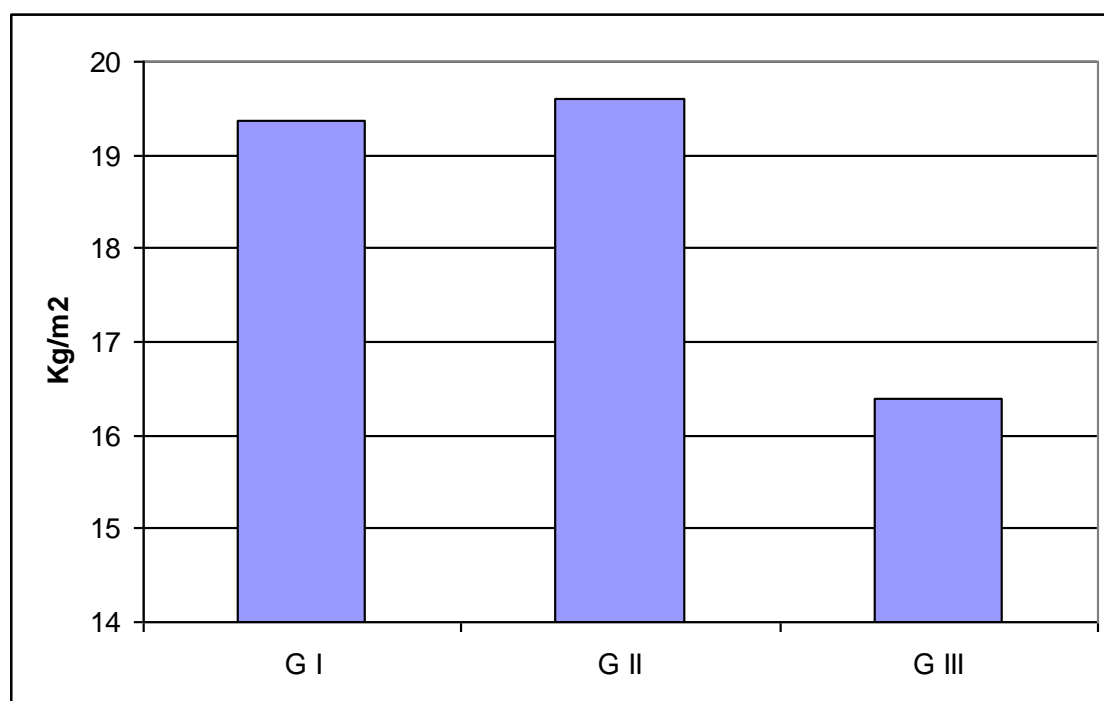**Figure (12):** Comparison of age among the studied groups shows statistically significant differences

Figure (13): Comparison of BMI among the studied groups shows that asthmatic patients had significantly higher BMI than control group

Table (9): Associated risk factors in the studied groups

		G I (Atopic) (n=10)	G II (Non-atopic) (n=10)	G III (Controls) (n=10)	Chi-square Test	
					X2	P
Residence	Urban	7 (70%)	4 (40%)	4 (40%)	2.4	0.3
	Rural	3 (30%)	6 (60%)	6 (60%)		
Seasonal variation	Winter	2 (20%)	8 (80%)		8.1	**0.017**
	Spring	7 (70%)	1 (10%)			
	Continuous	1 (10%)	1 (10%)			
Breast feeding	+	3 (30%)	2 (20%)	8 (60%)	8.42	**0.015**
	-	7 (70%)	8 (80%)	2 (40%)		
Parental asthma	+	2 (20%)	3 (30%)	-	3.36	0.19
	-	8 (80%)	7 (70%)	10 (100%)		
Parental smoking	+	7 (60%)	5 (50%)	5 (50%)	0.83	0.66
	-	3 (40%)	5 (50%)	5 (50%)		

This table shows that asthmatic patients whether atopic or non-atopic had significantly lower frequency of breastfeeding than non-asthmatic patients. Despite asthmatic patients had higher frequency of urban residence, parental asthma and parental smoking, than healthy controls, the difference is short of statistical significance. Atopic cases had significantly higher frequency of presentation in spring while non-atopic patients had significantly higher frequency of presentation in winter.
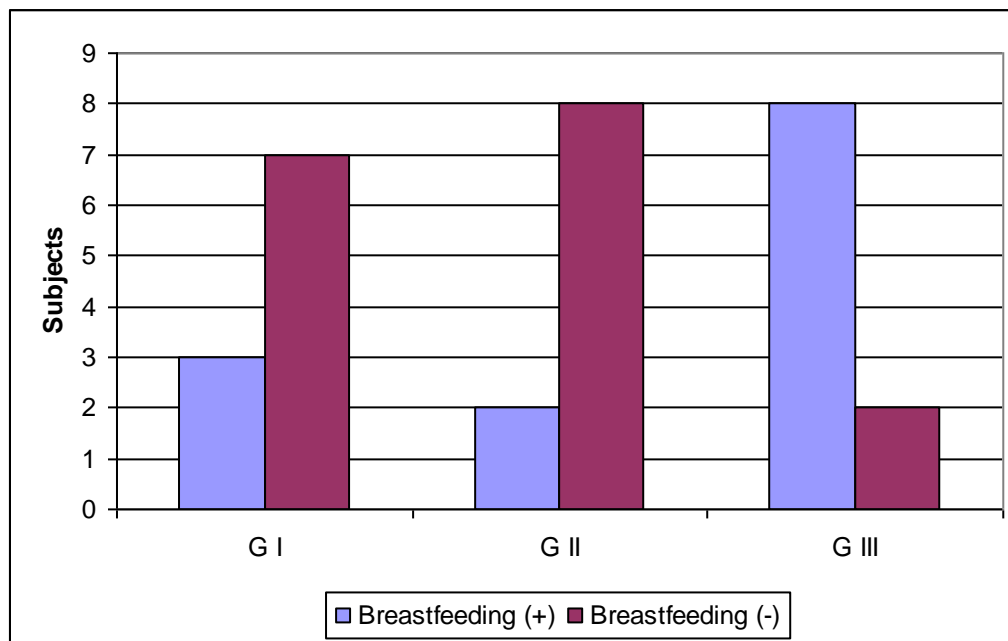
Figure (14): Comparison of frequency of breastfeeding in the studied groups shows that asthmatic patients had significantly lower frequency of breast feeding when compared with healthy controls.
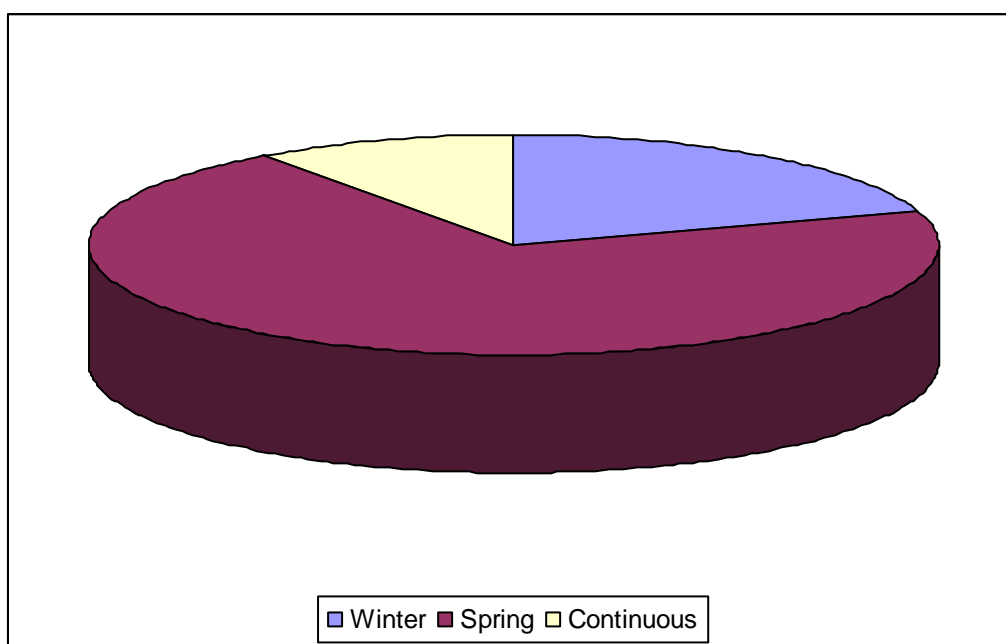
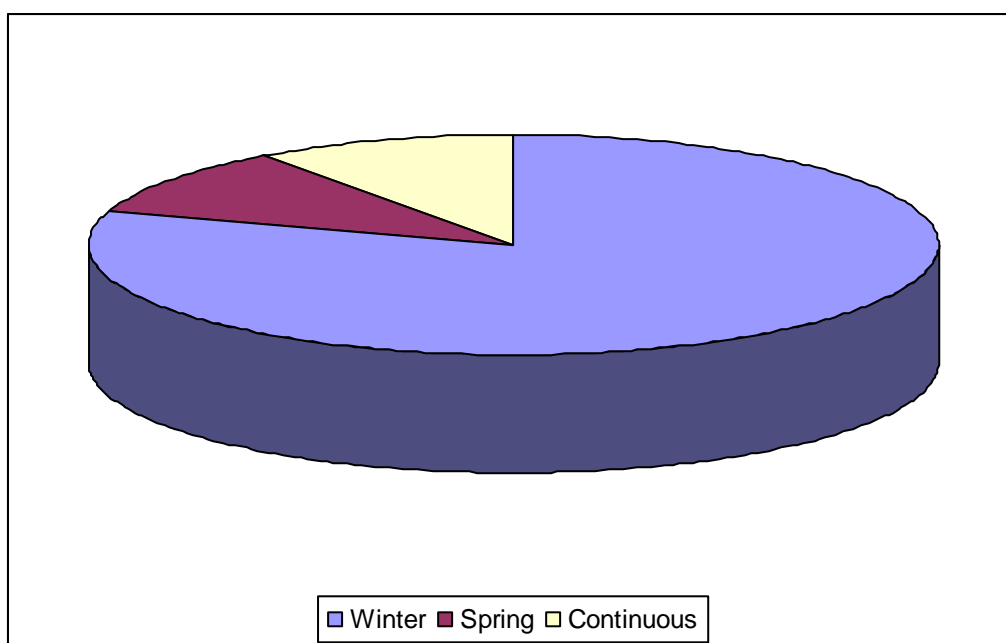**Figure (15):** Seasonal variation in atopic patients

Figure (16): Seasonal variation in non-atopic patients

Table (10): Asthma characteristics in the studied patients

			G I (Atopic) (n=10)	G II (Non-atopic) (n=10)	Student t test	
					t	p
Age of onset (years)			3.65 ± 2.49	2.95 ± 2.1	-0.68	0.51
Duration (Years)			4.45 ± 1.93	5.35 ± 1.67	-1.11	0.28
					Chi-square Test	
					X^2	p
Severity		Intermittent	2 (20%)	1 (10%)	0.48	0.92
	Persistent	Mild	4 (40%)	4 (40%)		
		Moderate	3 (30%)	4 (40%)		
		Severe	1 (10%)	1 (10%)		

This table shows that there was no statistically significant differences between atopic and non-atopic patients regarding disease duration or disease severity.

Table (11): Comparison of laboratory findings in the studied groups

	G I (Atopic) (n=10)	G II (Non-atopic) (n=10)	G III (Controls) (n=10)	One Way ANOVA	
				F	**P**
TLC ($\times 10^3$)	12.0 ± 3.84	14.8 ± 5.04	8.6 ± 2.89	6.0	0.007
Eosinophilic **%**	3.6 ± 0.85	3.48 ± 0.67	2.52 ± 0.11	8.91	0.001
IgE (IU/ml)	115.2 ± 11.3	61.7 ± 10.2	55.1 ± 7.6	11.8	0.0001
TGFβ-1 (ng/ml)	18.79 ± 10.53	27.2 ± 11.33	3.41 ± 2.89	17.6	0.0001

Post-hoc LSD analysis
- **TLC:** GI vs GII: NS, GI vs GIII: NS (0.07), GII vs GIII: p=0.002
- **Eosinophilic %:** GI vs GII:NS, GI vs GIII: p=0.002, GII vs GIII: p=0.001
- **TGFβ-1:** GI vs GII: p=0.049, GI vs GIII: p=0.001, GII vs GIII: p=0.0001
- **IgE:** GI vs GII: p=0.0001, GI vs GIII: p=0.0001, GII vs GIII: NS

This table shows that asthmatic patients (atopic and non-atopic) had significantly higher mean TLC than healthy controls; however, there is no statistically significant differences between the two asthmatic groups. Regarding mean eosinophilic **%**, it was shown that both asthmatic groups had eosinophilic **%** significantly higher than healthy controls; in addition atopic group had significantly higher esinophilic %. As regards TGFβ-1, it was revealed that both asthmatic groups had significantly higher serum TGFβ-1 levels than control patients; further non-atopic patients had significantly higher serum TGFβ-1 levels than atopic patients. In respect to IgE, we found that atopic patients had significantly higher IgE levels than non-atopic patients and controls, while no significant differences was found between non-atopic patients and controls.
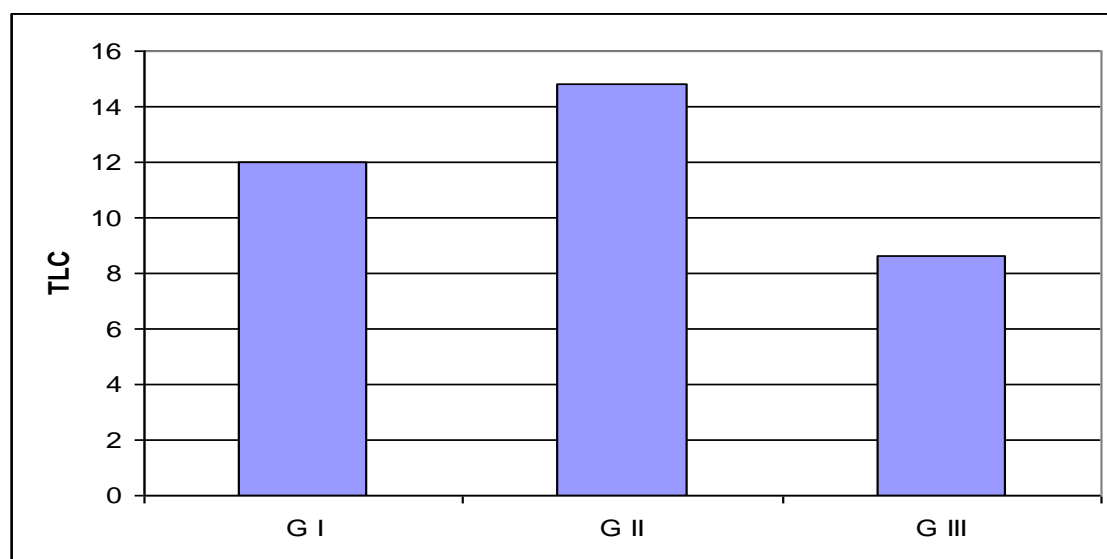
Figure (17): Comparison of TLC among the studied groups shows that asthmatic patients whether atopic or non-atopic had significantly higher TLC than the healthy controls.
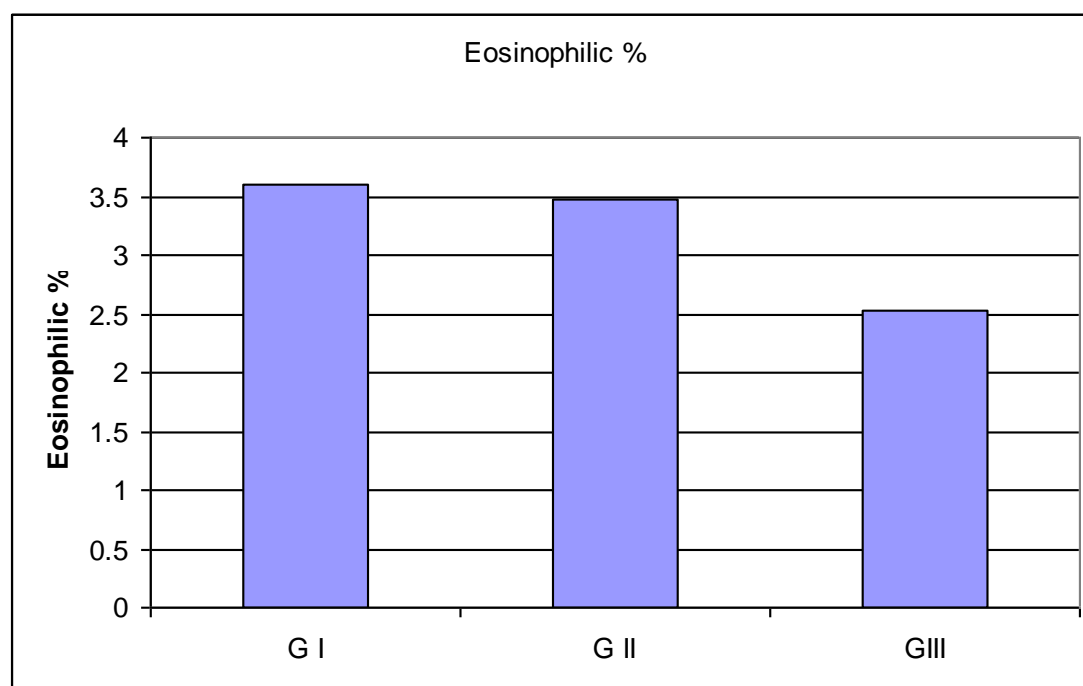

Figure (18): Comparison of eosinophilic **%** among the studied groups shows that asthmatic patients whether atopic or non-atopic had significantly higher eosinophilic **%** than the healthy controls. in addition atopic group had significantly higher esinophilic % than non-atopic patients.
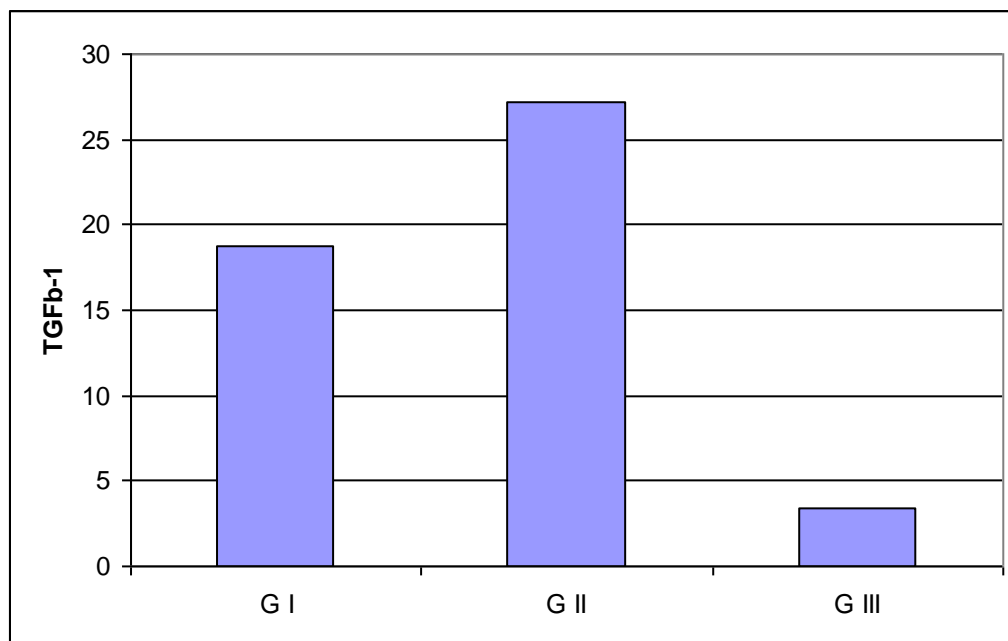
Figure (19): Comparison of TGFβ-1 among the studied groups shows that asthmatic patients whether atopic or non-atopic had significantly higher TGFβ-1 than the healthy controls. in addition non-atopic group had significantly higher TGFβ-1.
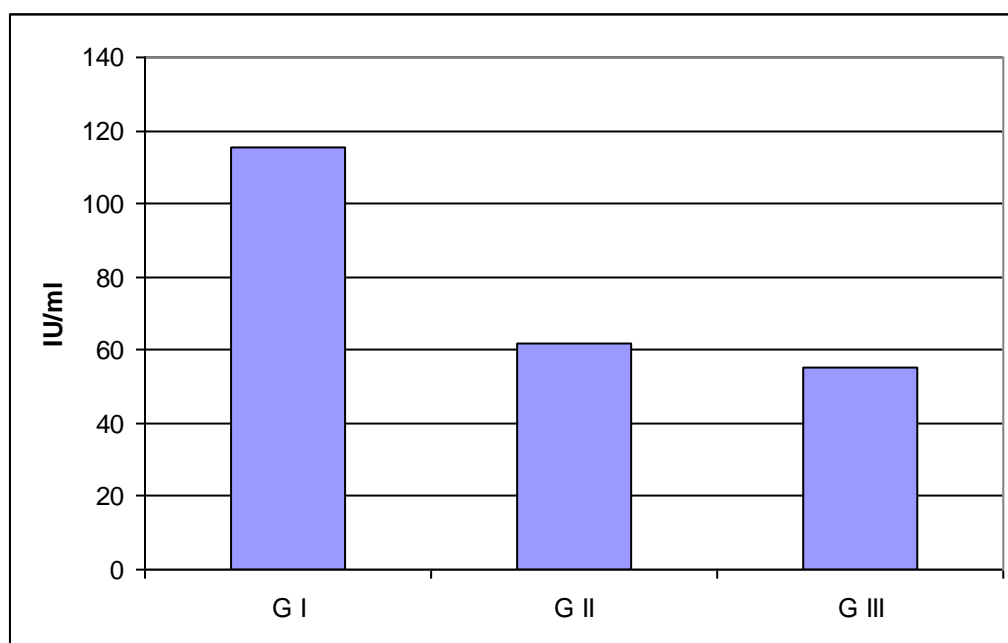

Figure (20): Comparison of IgE levels among groups showed that atopic patients had significantly higher IgE levels than non-atopic patients and controls, while no significant differences was found between non-atopic patients and controls.

Table (12): Relation of serum TGFβ-1 to demographic characteristics

			Pearson's correlation coefficient	
			r	p
Age (Years)			0.3	0.2
Weight (kg)			0.19	0.42
Height (m)			0.33	0.16
BMI (kg/m^2)			0.06	0.79
			Student t test	
			t	p
Sex	**Male**	18.32 ± 5.46	-1.72	0.085
	Female	26.8 ± 13.8		

This table shows no relation between serum TGFβ-1 level and various demographic parameters.

Table (13): Relation of serum TGFβ-1 to associated risk factors

			Student t Test	
			t	p
Residence	Urban	19.13 ± 7.5	-1.64	0.13
	Rural	27.7 ± 14.07		
Breast feeding	+	22.7 ± 15.4	-0.059	0.95
	-	23.07 ± 10.5		
Parental asthma	+	28.3 ± 15.44	0.95	0.25
	-	21.22 ± 9.88		
Parental smoking	+	21.95 ± 11.4	-0.54	0.6
	-	24.9 ± 12.3		

This table shows no relation between serum TGFβ-1 level and the associated risk factors.

Table (14): Relation of serum TGFβ-1 to asthma characteristics

			Pearson's correlation coefficient	
			r	**p**
Duration (Years)			0.3	0.2
			One Way ANOVA	
			F	**p**
Severity		Intermittent	25.48 ± 16.9	
	Persistent	Mild	23.0 ± 10.78	
		Moderate	23.44 ± 13.08	0.17	0.91
		Severe	17.54 ± 3.75	

This table shows no relation between serum TGFβ-1 level and asthma duration and severity.

Table (15): Relation of serum TGFβ-1 to laboratory findings

	Pearson's correlation coefficient	
	r	**p**
TLC	0.13	0.59
Esinophilic %	0.3	0.19
IgE	0.11	0.63

This table shows no relation between serum TGFβ-1 level and TLC, Esinophilic % and IgE.