# Results

Tables (11-16) and figures (13-24) summarize and illustrate the results of our work.

**Table (11): Some ecological and clinical aspects of the study groups.**

| | | Atopic asthma Nº =30 | | Non-atopic asthma Nº =30 | | Control Nº =20 | |
|---|---|---|---|---|---|---|---|
| | | Mean ± SD | | Mean ± SD | | Mean ± SD | |
| Age (years) | | 7.5 ± 2.2 | | 7.7 ± 2.2 | | 8.8 ± 2 | |
| | | Nº | % | Nº | % | Nº | % |
| Gender | Male | 21 | 70% | 21 | 70% | 10 | 50% |
| | Female | 9 | 30% | 9 | 30% | 10 | 50% |
| Residence | Urban | 20 | 66.6% | 23 | 76.6% | 15 | 75% |
| | Rural | 10 | 33.3% | 7 | 23.3% | 5 | 25% |
| Age of onset of symptoms | Early onset | 24 | 80% | 23 | 76.6% | _ | _ |
| | Late onset | 6 | 20% | 7 | 23.3% | _ | _ |
| Steroid usage | Steroid users | 9 | 30% | 13 | 43.3% | _ | _ |
| | Steroid non-users | 21 | 70% | 17 | 56.6% | _ | _ |
| Obesity | Obese | 2 | 6.6% | 1 | 3.3% | 1 | 5% |
| | Non-obese | 28 | 93.3% | 29 | 96.6% | 19 | 95% |

From table (11), we can see that the mean age was 7.5 y's in the group of atopic asthma, 7.7 y's in that of non-atopic asthma and 8.8 y's in the control group.

**Fig. (13): Age distribution of the asthmatic patients.**



**Age Percentage**

11 Years 5%
12 Years 5%
10 Years 15%
5 Years 28.30%
9 Years 13.30%
6 Years 13.30%
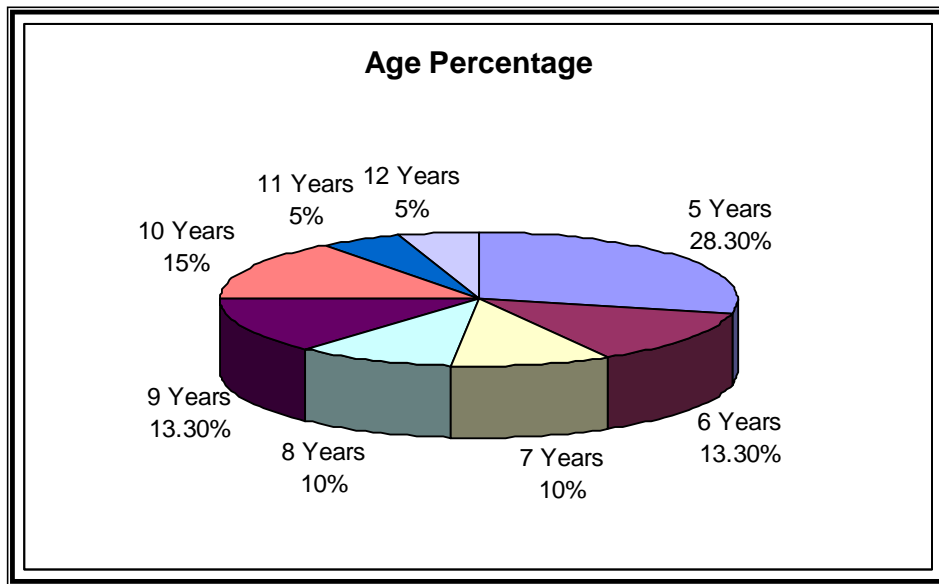8 Years 10%
7 Years 10%

Fig (13) shows the age distribution of our asthmatic children. There is predominance of the young age (5 years, 28.3%).

**Fig. (14): Sex distribution of the asthmatic patients.**



**Sex distribution**

70%    70%
70%
60%
50%
40%    30%    30%
30%
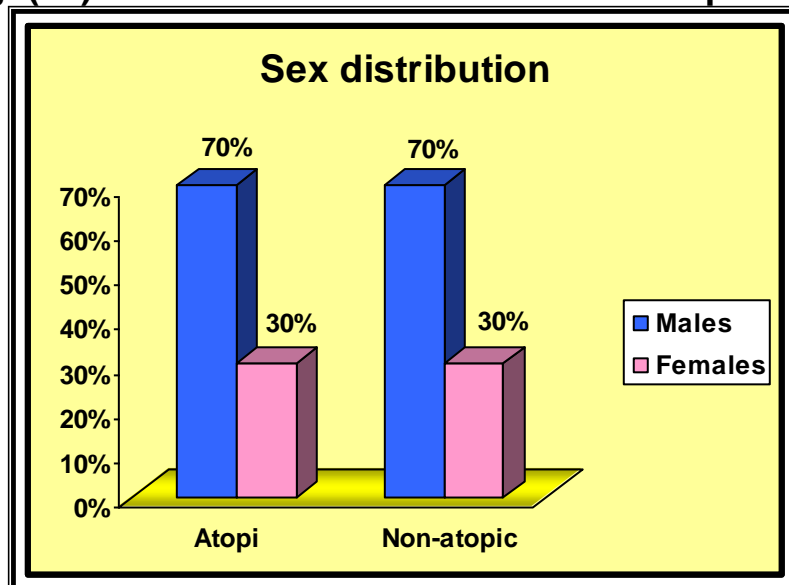20%    ■ Males
10%    □ Females
0%
Atopi    Non-atopic

Fig. (14) shows that both atopic and non- atopic asthma were similarly commoner in males (70%) than in females (30%).

**Fig. (15): Residence distribution of our patients.**
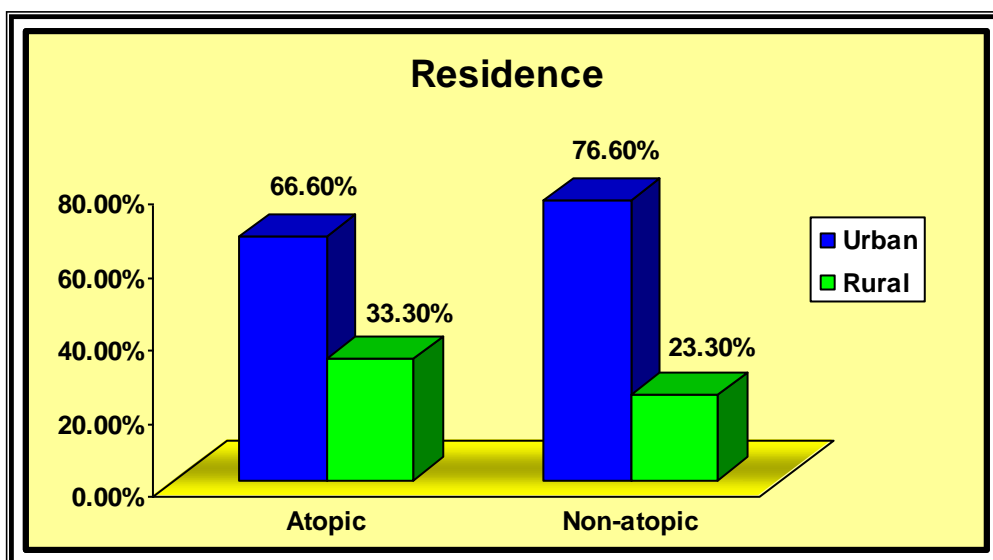
**Residence**

Fig. (15) shows that both atopic and non-atopic asthma were commoner in the urban areas than in the rural areas.

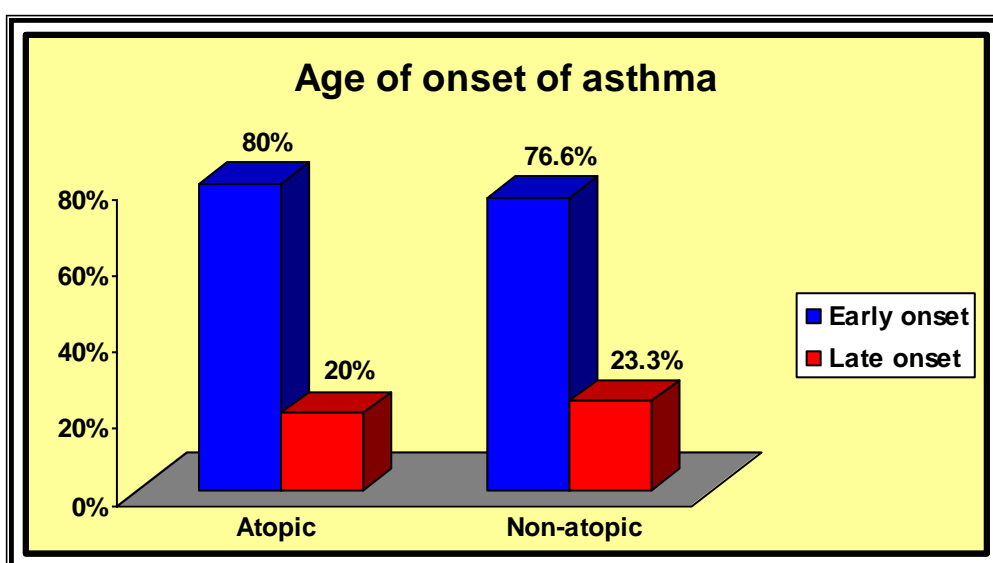**Fig. (16) Age of onset of asthma in our patients.**



**Age of onset of asthma**

Fig. (16) shows that both atopic and non-atopic asthma started more frequently in early life.

**Fig. (17): Steroid usage by our asthmatic children.**
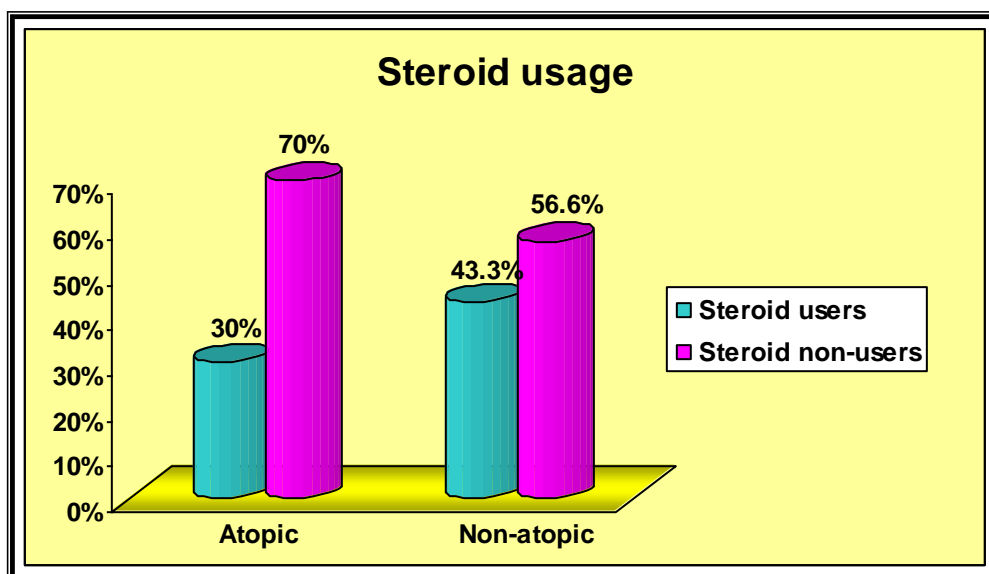
**Steroid usage**

Fig.(17) shows that corticosteroid agents were used only in 30% of our atopic and 43.3% of our non-atopic patients.

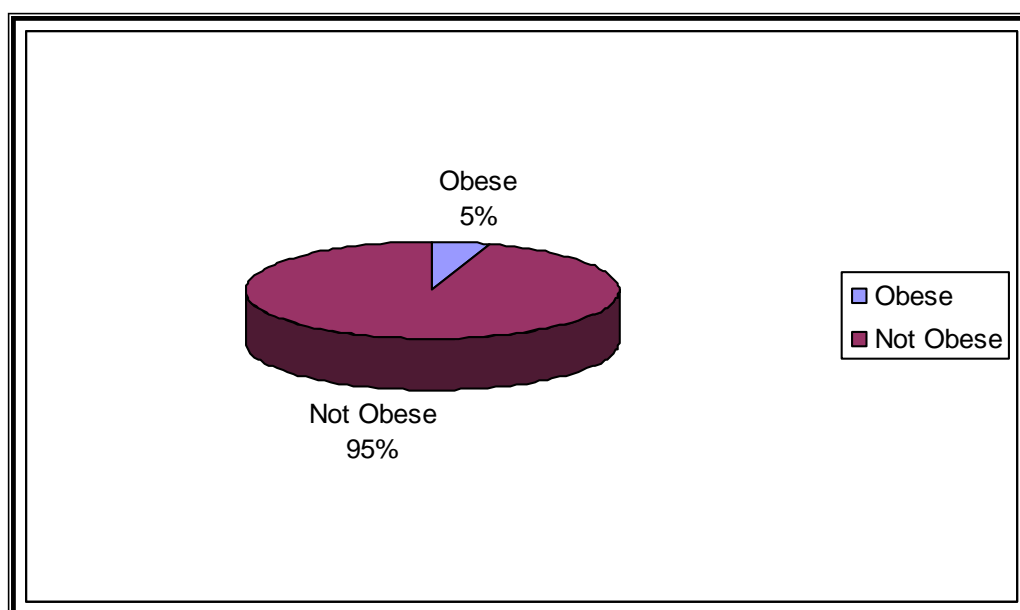**Fig. (18): Frequency of obesity among our asthmatic children.**



Fig. (18) shows that obesity is rare among our patients (5%).

**Table (12): Anthropometric measures of asthmatics and controls**

| | Patients | | Control | | T-test | P-value |
|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Mean | Std. Deviation | | |
| **Weight (kg)** | 26.04 | 9.464 | 28.95 | 8.919 | 1.207 | 0.231 |
| **Height (cm)** | 119.68 | 14.101 | 126.75 | 11.889 | 2.013 | **0.048** |
| **B.M.I** | 17.883 | 4.4562 | 17.705 | 3.2271 | -.165 | 0.870 |
| **Skin fold thickness (cm)** | 0.888 | 0.2484 | 1.065 | 0.2777 | 2.674 | **0.009** |
| **Skull circumference (cm)** | 49.800 | 2.0319 | 50.375 | 1.3848 | 1.175 | 0.243 |
| **Waist circumference (cm)** | 56.47 | 8.910 | 58.73 | 9.186 | 0.974 | 0.333 |
| **Chest circumference (cm)** | 58.83 | 8.893 | 60.95 | 8.003 | 0.944 | 0.348 |

**(Significant if P-value ≤ 0.05)**

Table (12) shows that the mean height and the mean skin fold thickness are significantly less in our asthmatics than in the controls with P-values of 0.048 and 0.009 respectively. Also, the mean weight of our asthmatics is less than that of the controls but, with no significant difference.

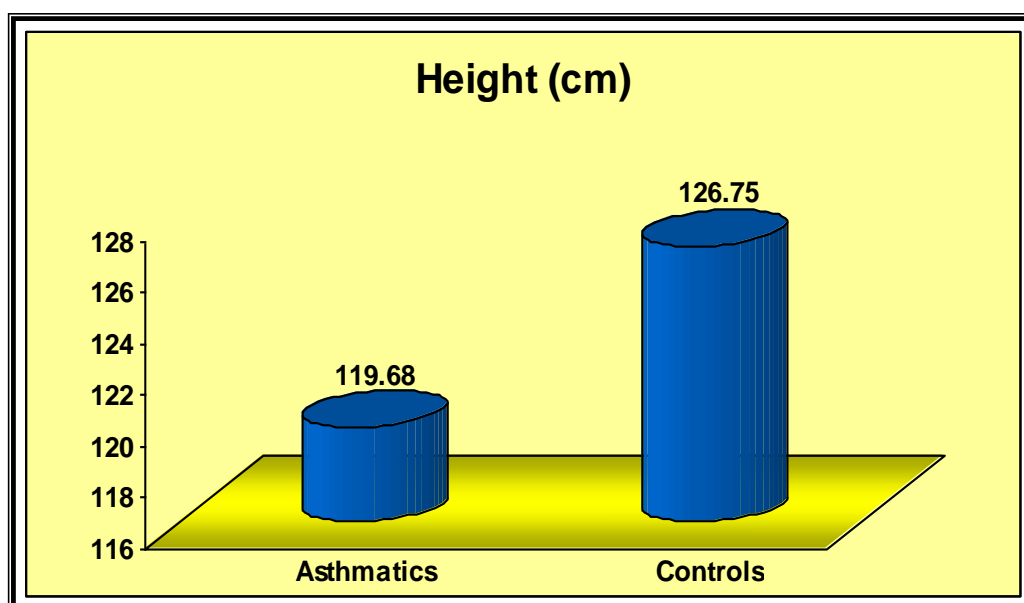**Fig. (19): Height of the asthmatics and controls.**

Fig. (19) shows that the asthmatic children are significantly shorter than the controls.

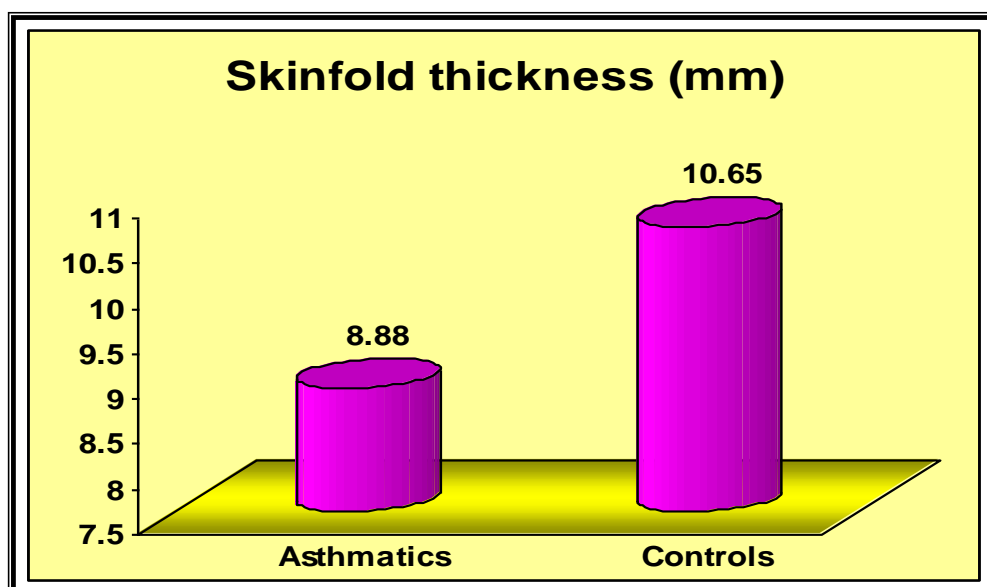**Fig. (20): Skinfold thickness of asthmatics & controls.**



Fig. (20) declares that the skin fold thickness, as a measure of adiposity, is significantly less in the asthmatics  than in the controls.

**Table (13): Anthropometric measures in atopic and non-atopic asthma**

| | Atopic | | Non atopic | | T-test | P-value |
|---|---|---|---|---|---|---|
| | **Mean** | **± S.D.** | **Mean** | **± S.D.** | | |
| **Weight (kg)** | 25.97 | 10.156 | 26.12 | 8.892 | -0.061 | 0.952 |
| **Height (cm)** | 119.43 | 13.135 | 119.93 | 15.227 | -0.136 | 0.892 |
| **B.M.I.** | 17.713 | 4.0874 | 18.053 | 4.8614 | -0.293 | 0.770 |
| **Skin fold thickness (cm)** | 0.897 | 0.2220 | 0.880 | 0.2759 | 0.258 | 0.798 |
| **Skull circumference (cm)** | 50.20 | 2.091 | 49.400 | 1.9226 | 1.543 | 0.128 |
| **Waist circumference (cm)** | 57.87 | 9.168 | 55.07 | 8.568 | 1.222 | 0.227 |
| **Chest circumference (cm)** | 58.57 | 7.852 | 59.10 | 9.955 | -0.230 | 0.819 |

**(Significant if P-value ≤ 0.05)**

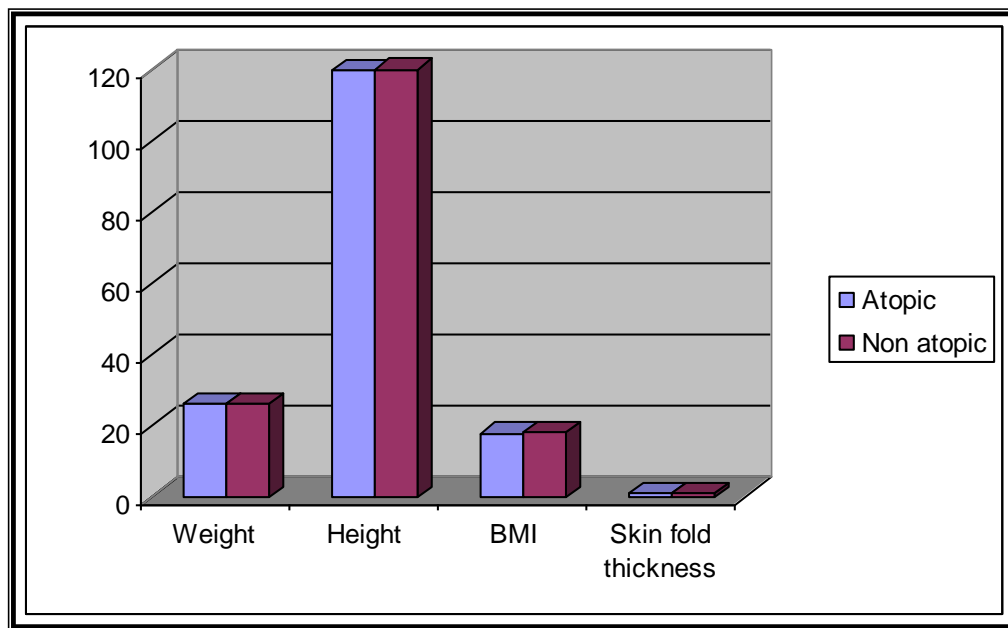**Fig. (21): Anthropometric measures in atopic and non-atopic asthmatics**



Table (13) and Fig (21) show that there are no significant differences in all growth parameters between atopic and non atopic asthmatics.

**Table (14): Anthropometric measures of asthmatics using steroids and those not using steroids**

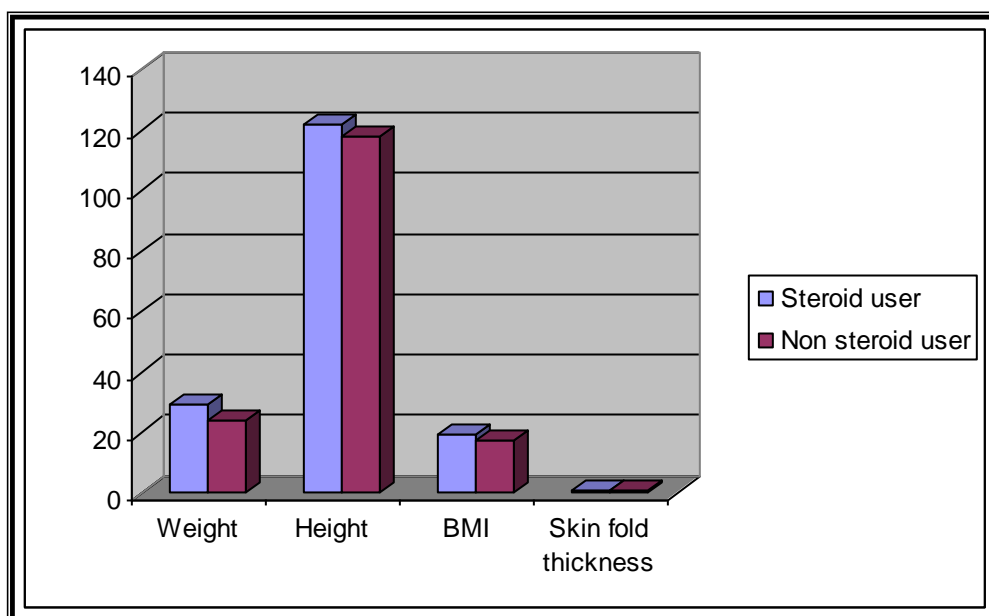| | Steroid users | | Non-steroid users | | T-test | P-value |
|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Mean | Std. Deviation | | |
| Weight (kg) | 29.09 | 11.801 | 24.28 | 7.420 | 1.726 | 0.094 |
| Height (cm) | 122.23 | 17.054 | 118.21 | 12.079 | 1.065 | 0.292 |
| B.M.I | 19.200 | 5.5169 | 17.121 | 3.5725 | 1.773 | 0.082 |
| Skin fold Thickness (cm) | 0.877 | 0.2159 | 0.895 | 0.2681 | -0.26 | 0.796 |
| Skull circumference (cm) | 50.07 | 2.264 | 49.64 | 1.899 | 0.775 | 0.441 |
| Waist circumference(cm) | 57.61 | 11.409 | 55.80 | 7.175 | 0.672 | 0.507 |
| Chest circumference (cm) | 60.61 | 11.378 | 57.80 | 7.048 | 1.048 | 0.303 |

**(Significant if P-value ≤ 0.05)**

Table (14) and fig. (22) Show no significant differences in the anthropometric measures between asthmatics using steroids and those not using steroids.

**Table (15): Anthropometric measures of urban and rural asthmatics**

| | Urban | | Rural | | T-test | P-value |
|---|---|---|---|---|---|---|
| | **Mean** | **Std. Deviation** | **Mean** | **Std. Deviation** | | |
| **Weight (kg)** | 26.28 | 10.357 | 25.44 | 6.941 | 0.307 | 0.760 |
| **Height (cm)** | 118.65 | 14.847 | 122.29 | 12.020 | -0.900 | 0.372 |
| **B.M.I** | 18.34 | 4.996 | 16.74 | 2.397 | 1.261 | 0.212 |
| **Skin fold thickness (cm)** | 0.902 | 0.2712 | 0.853 | 0.1807 | 0.691 | 0.492 |
| **Skull circumference (cm)** | 49.84 | 2.140 | 49.71 | 1.786 | 0.224 | 0.824 |
| **Waist circumference (cm)** | 56.40 | 9.891 | 56.65 | 5.989 | -0.098 | 0.922 |
| **Chest circumference (cm)** | 58.87 | 10.049 | 58.74 | 5.154 | 0.053 | 0.958 |

**(Significant if P-value ≤ 0.05)**

**Fig. (23): Anthropometric measures of urban and rural asthmatics.**
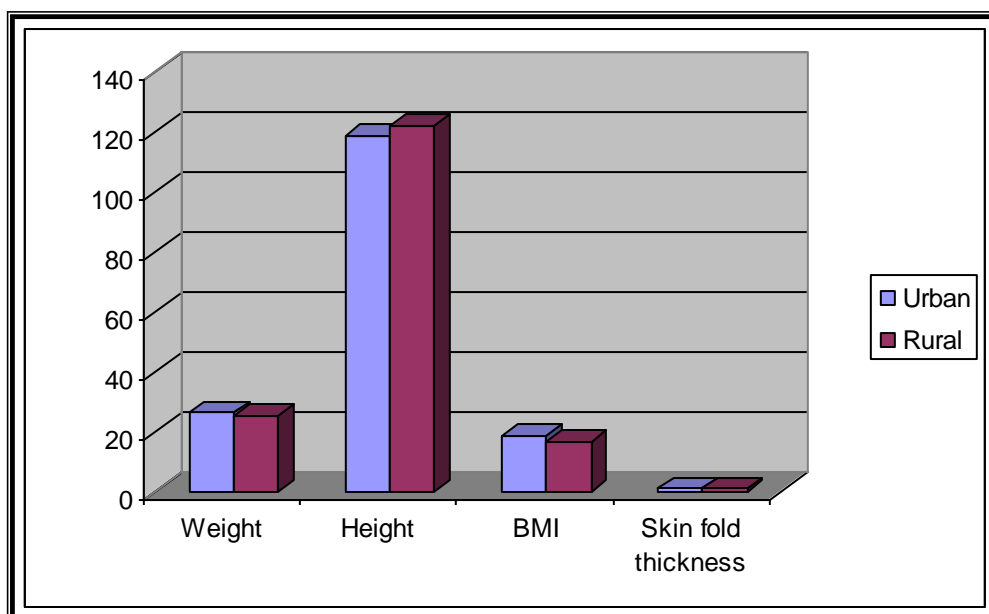
Table (15) and Fig (23) show that there are no significant differences in all growth parameters between urban and rural asthmatics.

**Table (16): Anthropometric measures of asthmatics with early onset and those with late onset**

|  | Early age of onset | | Late age of onset | | T-test | P-value |
|---|---|---|---|---|---|---|
|  | Mean | Std. Deviation | Mean | Std. Deviation |  |  |
| **Weight (kg)** | 25.96 | 9.723 | 26.35 | 8.826 | -0.130 | 0.897 |
| **Height (cm)** | 118.89 | 14.407 | 122.54 | 13.061 | -0.823 | 0.414 |
| **B.M.I** | 18.072 | 4.7959 | 17.200 | 2.9698 | 0.621 | 0.537 |
| **Skin fold thickness (cm)** | 0.885 | 0.2621 | 0.900 | 0.2000 | -0.190 | 0.850 |
| **Skull circumference (cm)** | 49.819 | 2.0201 | 49.731 | 2.1565 | 0.138 | 0.891 |
| **Waist circumference (cm)** | 56.87 | 8.982 | 55.00 | 8.839 | 0.667 | 0.507 |
| **Chest circumference (cm)** | 58.88 | 8.198 | 58.65 | 11.454 | 0.082 | 0.935 |

**(Significant if P-value ≤ 0.05)**

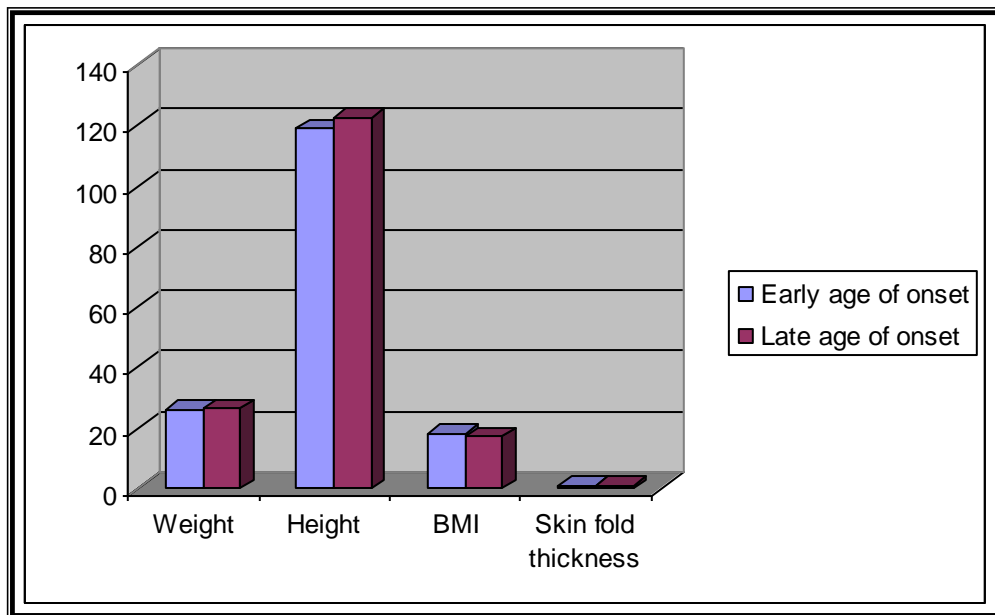**Fig. (24): Anthropometric measures of asthmatics with early onset and those with late onset**

Table (16) and fig. (24) Show no significant differences in the anthropometric measures between asthmatics with early and those with late age of onset of the disease.