INTRODUCTION
Asthma is a chronic inflammatory disease of the airways in which many cells and cellular elements play an important role. Chronic inflammation of the airways is associated with a very slow response from the body leading to recurrent episodes of wheezing, breathlessness, chest tightness and coughing, particularly at night or early morning. Asthma is a condition defined by clinical features, physiological and pathological ones (GINA 2010).

Inhaled corticosteroids (ICS) began to be increasingly used to treat asthma since asthma was labeled as a chronic inflammatory disease. ICS offers a wide range of inflammatory activity and have consistently shown that is the most effective mean to control asthma in childhood (17, 23, 18).

ICS is the first line therapy for patients with persistent asthma, they are only currently available therapy, which suppresses the asthmatic airway inflammation by inhibiting almost every aspect of the inflammatory process in asthma. Inhaled corticosteroids are effective in most patients with asthma, regardless of age or disease severity (1), they are indispensable in the treatment of asthma (10). Under current guidelines, inhaled corticosteroids are the preferred first line treatment for children with asthma long term in all age groups (11), they represent the central axis of the treatment (21, 2), ICS being the “gold standard” in anti-inflammatory asthma therapy (8).

ICS represents the “cornerstone” in control of asthma control may be influenced by several factors, both behavioral and treatment-related, the result depending on how patients and carers cooperate in following the treatment properly administered (13). One of the advantages of using ICS is that their effect is very fast and prompt (19).

In practice we use low-dose of ICS with a comparable effect with moderate doses (24), our study with patients using these low-dose ICS (Budesonide 200-400μg/day or Fluticasone 100-300μg/day). Opinion of many clinicians is to use small doses of ICS as to decrease the chances of us experiencing these adverse effects (16), other researchers indicate if the dose of ICS are not sufficient to associate with beta2 agonists (15). They are opinions which stresses that the use of ICS in acute asthma crises have a lower systemic corticosteroid administration (5).

Like most of corticosteroids, the inhalers can have adverse effects on long-term treatments, among which decreased growth and development (4), on which we focused the study. Regarding the adverse effects of ICS opinions are divided, some studies show that lower growth in children ICS asthma (12), but on the contrary others consider that the ICS do not have a negative influence on growth (22).

According to some authors is that the ICS should not be used routinely to treat acute asthma exacerbations (9), while others believe that treatment with only inhaled corticosteroid alone is not sufficient in controlling asthma, requiring association with beta2 agonists long-term (3).

STUDY OBJECTIVE
The purpose of the study is conducted to investigate how to use of inhaled corticosteroids in children with asthma affects their growth rate.

MATERIAL AND METHOD
Our study considered 200 subjects, 100 were children with mild or moderate asthma under treatment with low doses of ICS, and 100 were represented by the control group, children who did not have any chronic disease and did not have growth disorders. Subjects were divided into five age categories: under 8 years between 8 years and one day to 10 years, 10 years and a day and 13 years, between 13 years and a day and 16 and between 16 years and a day and 19 years. For each age group both witnesses and those with asthma and measurements were made at intervals of six months for two years, the following anthropometric parameters: height, leg length and the length of
the plant.

RESULTS AND DISCUSSIONS

1.Height:

Control group under 8 years: from the measurements shows a mean difference of 0.70 mm in the first year and 1.32 mm in 2 years.

- The group 8 years -10 years and a day: from the measurements shows a mean growth difference of 0.45 mm and 1.07 mm after two years.

Figure no. 1. Gf. 1 measured values in asthmatic children between 8 years and a day to 10 years

Figure no. 2. Hx - the value of which increased in the first year HQ - the amount that has grown in two years

- The group 10 years and one day -13 years: from the measurements shows a mean difference of 1 year increase 0.77 mm and 1.16 mm at 2 years.
- The group 13 years and one day -16 years: measurements showed an average increase in a difference of 0.57 mm and 1.07 mm at 2 years.
- The group 16 years and one day -19 years: measurements revealed an average of 0.66 mm after one year and after two years of 1.36 mm.
- Lot cases under 8 years of measurements observed a mean difference in first year growth of 0.60 mm and 1.29 mm after two years.
- The group 8 years -10 years and a day: the measured values show that the average difference is 0.31 mm and 0.60 mm in the first year in 2 years.
- The group 13 years and one day -16 years: measurements showed a mean difference after the first year growth of 0.55 mm and 0.99 mm after 2 years.
- The control group age group under 8 years of measured values can be seen that the average difference in growth after the first year was 0.30 mm and 0.61 mm after two years.
- The group 8 years and a day -10 years: an average measured values of the difference in growth after the first year of 0.34 mm and 0.67 mm after two years.
- The group 10 years and one day -13 years: measured values indicate an average growth difference of 0.31 mm in the first year and after two years of 0.61 mm.
- The group 13 years and one day -16 years: measured values lead to an average growth difference after the first year of 0.29 mm and 0.56 mm after two years.
- The group 16 years and one day -19 years: measured values lead to an average growth difference after the first year of 0.29 mm and 0.53 mm after two years.

2.Plant lenght:

Lot cases under 8 years of measured values show that the average difference is 0.31 mm and 0.60 mm in the first year in 2 years.
- The group 8 years -10 years and a day: the measured values shows that the difference in growth after the first year was 0.30 mm and 0.61 mm after two years.
- The group 10 years and one day -13 years: the measured values we see that the average difference in growth after the first year was 0.28 mm and 0.55 mm after two years.
- The group 13 years and one day -16 years: the measured values we see that the average difference in growth after the first year was 0.27 mm and 0.51 mm after two years.
- The group 16 years and one day -19 years: the measured values we see that the average difference in growth in the first year was 0.26 mm and 0.49 mm after two years.
- The control group age group under 8 years of measured values can be seen that the average difference in growth after the first year was 0.30 mm and 0.62 mm after two years.
- The group 8 years and a day -10 years: an average measured values of the difference in growth after the first year of 0.34 mm and 0.67 mm after two years.
- The group 10 years and one day -13 years: measured values indicate an average growth difference of 0.31 mm in the first year and after two years of 0.61 mm.
- The group 13 years and one day -16 years: measured values lead to an average growth difference after the first year of 0.29 mm and 0.56 mm after two years.
- The group 16 years and one day -19 years: measured values lead to an average growth difference after the first year of 0.29 mm and 0.53 mm after two years.
3. Leg length:

Figure no. 5. Measured values in asthmatic children between 8 years and a day to 10 years

![Graph showing measured values in asthmatic children between 8 years and a day to 10 years.]

Figure no. 6. Kx - the value of which increased in the first year KQ - the amount that has grown in two years

![Graph showing Kx and KQ values in asthmatic children.]

**CONCLUSIONS**

1. The height variation is found between the control group and those with asthma of between 0.10 mm and 0.22 mm in the first year and 0.03 mm and 0.19 mm after two years.
2. The length of the plant is a variation between 0.01 mm and 0.04 mm after the first year and 0.02 mm and 0.06 mm after two years.
3. The leg length variation is found between 0.02 mm and 0.04 mm after the first year and of 0.03 mm and 0.05 mm after two years.
4. We can say that the average difference in growth of the subjects under study leads to a result that confirms that the growth rate in children treated with inhaled corticosteroids in low doses is not significantly influenced by them.

**BIBLIOGRAPHY**

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