



Real-life study on the efficacy of Tiotropium Bromide in pediatric severe asthma

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Background

There are evidence of efficacy and safety of Tiotropium Bromide in severe asthma in children. The aim of this study was evaluate the efficacy of Tiotropium Bromide (TB) in children with severe asthma using clinical and lung function parameters.

Methods

We performed an open study with children and adolescents diagnosed with severe allergic asthma, in GINA's step 4 or 5 of treatment, in three centers in Brazil. Asthma Control Test (ACT), exacerbations, use of medication and spirometry were assessed before and after the TB, as well as patient and family satisfaction and adverse events.

Results

Eighteen patients were involved, mean age of 12 6 4 years and mean time with TB was 7.5 months.

Thirteen (72%) had positive skin test for aeroallergens; the geometric mean of total IgE was 545 kU/L. All patients were using high dose of combination corticosteroids and LABA, 4 (22%) xanthines, 9 (50%) leukotriene modifiers, one oral corticosteroid and two have already used Omalizumab. The mean ACT was 13 6 4 before TB and 19 6 4 after ($p = 0.0003$). FEV1 before BT was 85 6 23% and 89 6 21% ($p = 0.51$). No serious adverse events were observed.

Conclusions

There was significant clinical improvement in a small group of children and adolescents with severe asthma who received TB as an add on treatment to severe asthma. Tiotropium bromide is an option to severe asthma refractory to prophylactic treatment.

| | n= 18 |
|-------------------|------------|
| age (mean)± SD | 11,9±3,9 |
| Skin Prick test + | 13 (72,2%) |
| Treatments | |
| ICS | 4 (22,2%) |
| ICS + LABA | 18 (100%) |
| Xanthine | 4 (22,2%) |
| Montelukast | 9 (50%) |
| Omalizumab | 2 (11,1%) |
| Oral steroids | 1 (5,5%) |
| Tiotropium time | 7,5 (1-18) |

