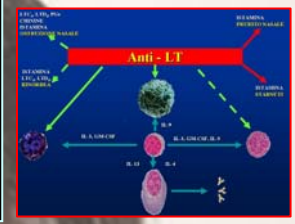
Is montelukast effective in allergic rhinitis in children?

Tiziana Guerrera, MD[1], Barbara Cuomo, MD[1], Micol Cossettini, MD[1], Lolita Fasoli, MD[1], Francesca Saretta, MD[1], Antonio Morittu, MD[1], Luigina Lesa, MD[2], Germana Modesti, MD[2], Franca Soldano, MD[3], Miriam Isola, MD[3], Daria Artico, MD[4], Carla Di Loreto, MD[4] and Mario Canciani, MD[1].

1 Pediatrics Dpt DPMSC, University of Udine, Italy; 2 SOC Pharmacy, S.M.Misericordia Hospital, Udine, Italy; 3 Statistics Dpt, University of Udine, Italy and 4 Pathology Dpt, University of Udine, Italy.

INTRODUTION

Montelukast (ML) is an antileukotriene used in the treatment of asthma. Several studies have demonstrated the effectiveness of ML in allergic rhinitis. To our knowledge, this is the first study in children.



METHODS

28 symptomatic allergic children were randomized, in double bind, to receive for 14days, during pollen exposure, levocetirizine (LC) 10mg or ML 5mg. No other treatments were allowed. Before and at the end of the study, in each patient were determinated: clinical scores, pulmonary function test(FEV_1, FVC, FEF_{25-75}), nasal obstruction (rynomanometry), nasal inflammation (nasal nitric oxide) and cell count in nasal mucus.

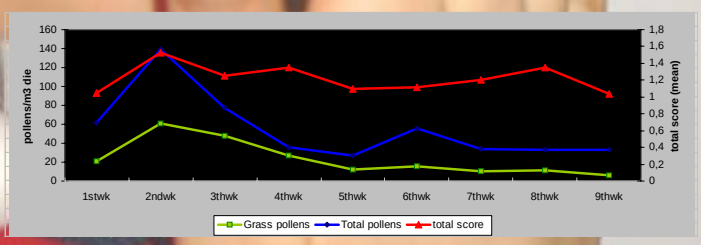
RESULTS

MONTELUKAST	T_0	T_2	Improvement	P
Day score	1,48±0,73	1,23±0,65	0,25±0,67	0,203
Night score	0,73±0,46	0,41±0,28	0,33±0,53	**0,048**
Eye score	0,98±0,84	0,750±0,91	0,23±1,21	0,503
Nose score	1,09±0,49	0,82±0,42	0,28±0,55	0,094
Total score	1,06±0,47	0,80±0,51	0,27±0,71	0,201

LEVOCETIRIZINE	T_0	T_2	Improvement	P
Day score	1,80± 0,38	1,45±0,69	0,35±0,80	0,110
Night score	0,89±0,63	0,59±0,49	0,30±0,35	**0,005**
Eye score	1,46±0,80	0,80±0,81	0,67±0,73	**0,003**
Nose score	1,34±0,38	1,02±0,45	0,32±0,46	**0,016**
Total score	1,38±0,43	0,95±0,52	0,44±0,47	**0,003**

P no significant for all variables	T_0	T_2	T_0	T_2
	LEVOCETIRIZINA		**MONTELUKAST**	
FEV1 (%)	**104,25±14**	**107,45±12**	**104,58±13**	**100,15±15**
Nasal nitric oxide (ppb)	**867±500**	**913 ±540**	**1172 ±550**	**1111 ±580**
Rynomanometry	**0,91 ±0.64**	**1.34 ±1.13**	**1,00 ±0.7**	**1.09 ±0.9**
Nasal Eosinophils(%)	**47,97±33**	**38,74±30**	**32,88±28**	**22,36±22**
Nasal Neutrophils (%)	**47,73±33**	**58,13±30**	**64,08±30**	**73,84±24**

13 children (10,38±2,18 ys) received ML and 15 children (9,20±2,34 ys) LC. The 2 groups were homogeneous for all variables. Compliance was excellent. Only mild adverse effects were noticed in both groups. Both treatments had a beneficial improvement in clinical scores, but only for patients with LC this was statistically significant for all clinical scores, except for the day score. Only the night score in the ML group had a statistical improvement ($t_0$0,73 ± 0,46, $t_2$1,23 ± 0,46; p=0,048). The other variables considered were not affected by the treatment in the both groups.



CONCLUSIONS

Even if more children have to be enrolled to confirm the results, we found that LC was superior to ML in controlling allergic rhinoconjunctivitis. Otherwise, ML could be prescribed in children who don't tolerate the traditional therapy.

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