DOI: 10.7860/JCDR/2019/40673.13386

Letter to Editor

Paediatrics Section

Is Episodic Short Course of Montelukast Effective in Preschool Wheezing?

PRAWIN KUMAR[1], JAGDISH PRASAD GOYAL[2]

Dear Editor,

We read with great interest the recent article which has been published in your esteemed journal in November 2018 [1]. Wheezing in preschool children is very a common condition in clinical practice and it is thirst area for research in paediatrics. Studies had shown conflicting role of Montelukast in preschool wheeze. We want to share a few of our thought regarding this article.

The aetiology of preschool wheezing is myriad. In this article, authors didn't provide information regarding exclusion of children with clinical features of atypical wheeze viz., Bronchopulmonary Dysplasia (BPD), wet cough, failure to thrive, malabsorption, clubbing, GERD etc., [2].

Authors had provided information about Paediatric Respiratory Assessment Measure (PRAM) score till 48 hours of admission; however, they have mentioned in the methodology that PRAM score was measured till discharge. In this study, the duration of hospitalisation were varied from 3-10 days. So it would be interesting to know the PRAM score between these two groups till discharge and also know whether significant difference in PRAM score persisted or nullified.

In [Table/Fig-5], authors had mentioned that number of doses of systemic steroid use (mean±SD) was significantly more in control than Montelukast group (vs 4.55±6.68 vs 3.16±2.05, p<0.00001). Here, SD is greater than the mean value. It might be possible that the data were not following the normal distribution. Moreover such data should be presented as Median (IQR).

Authors had observed that children who had received Montelukast had less duration of hospital stay in comparison to control group. However, it would be interesting to know which subset of children in the treatment group viz., severity of illness, age of the child, episodic vs multi trigger wheeze, family history of atopy, raised eosinophil count, exposure to smoke, post-viral wheezing etc. were most benefitted with addition of Montelukast [3]. Furthermore, it will help the general paediatrician to understand when to prescribe Montelukast in preschool wheeze.

Treatment parameter	Case (n=53) (%)	Control (n=54) (%)	p-value
Inhaled steroid use	19 (36)	22 (40)	0.6
Systemic steroid use	17(32)	18(33)	0.88
Other medication (inj MgSO4/ Aminophylline)	8 (15)	18 (33)	0.027
Number of doses of β2 agonist use (mean±SD)	19.6±3.97	22.4±3.08	0.069
Number of doses of inhaled steroid use (mean±SD)	2.15±0.25	2.5±0.23	0.54
Number of doses of systemic steroid use (mean±SD)	3.16±2.05	4.55±6.68	<0.00001

[Table/Fig-5]: Comparing treatment between two groups.

In this study, authors didn't mentioned regarding requirement of respiratory support viz., oxygen, CPAP or transfer to PICU for either monitoring or consideration of non-invasive or invasive ventilation. Moreover, in this study about 16 % of the children had severe disease as per PRAM score. Even if a child has intermittent episodes but if this episode is severe, requiring respiratory support or PICU admission, then it is wise to use continuous inhaled corticosteroids rather than intermittent therapy as per latest GINA guideline [4].

Authors had concluded that episodic short course of Montelukast may be an alternative approach for management of preschool wheeze, however, they have not mentioned how much short course will be useful. Authors also didn't not clarified about alternative approach, does the authors mean to say that Montelukast is effective alone or it should be consider in addition to all other therapies which they had used in their study. Furthermore, Montelukast is not free of adverse effect in children, it can cause severe neurological complication like nightmare, depression, aggression etc. or even eosinophilic granulomatosis with polyangitis like condition [5]. On the other hand, the addition of Montelukast will add the cost of management. Hence, the finding of this study should be taken as pinch of salt and more robust evidences are required before recommending Montelukast in intermittent preschool wheeze.

REFERENCES

[1] Surana AU, Patel SB, Chaudhary FV, Patel SS, Ansari RN, Pathan RR. Efficacy of episodic use of montelukast in preschool children with intermittent wheezing. Journal of Clinical and Diagnostic Research. 2018;12(11):SC04-07.

[2] Hussein HR, Gupta A, Broughton S, Ruiz G, Brathwaite N, Bossley CJ. A meta-analysis of montelukast for recurrent wheeze in preschool children. Eur J Paediatr. 2017;176(7):963-69.

[3] Bush A. Montelukast in paediatric asthma: where we are now and what still needs to be done? Paediatr Respir Rev. 2015;16(2):97-100.

[4] (*NEW) 2018 GINA Report: Global Strategy for Asthma Management and Prevention. Global Initiative for Asthma-GINA. Available from: http://www.ginasthma.org.

[5] Hon KL, Leung TF, Leung AK. Clinical effectiveness and safety of Montelukast in asthma. What are the conclusions from clinical trials and meta-analyses? Drug Des Devel Ther. 2014;8:839-50.

PARTICULARS OF CONTRIBUTORS:
1. Associate Professor, Department of Paediatrics, All India Institute of Medical Sciences, Jodhpur, Rajasthan, India.
2. Additional Professor, Department of Paediatrics, All India Institute of Medical Sciences, Jodhpur, Rajasthan, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:
Prawin Kumar,
Associate Professor, Department of Paediatrics AIIMS, Jodhpur, Rajasthan, India.
E-mail: drprawin484@hotmail.com

PLAGIARISM CHECKING METHODS: [Jain H et al.]
- Plagiarism X-checker: Dec 22, 2018
- Manual Googling: Dec 02, 2019
- iThenticate Software: Dec 03, 2019 (8%)

ETYMOLOGY: Author Origin

AUTHOR DECLARATION:
- Financial or Other Competing Interests: No
- Was informed consent obtained from the subjects involved in the study? NA
- For any images presented appropriate consent has been obtained from the subjects. NA

Date of Submission: **Dec 21, 2018**
Date of Peer Review: **Jan 11, 2019**
Date of Acceptance: **Feb 27, 2019**
Date of Publishing: **Dec 01, 2019**