

Parental Perception And Concern On Metered Dose Inhalers And Nebulizers In Asthma - A Cross Sectional Study

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I. Introduction:

Asthma is a serious global health problem affecting all age groups whose prevalence is increasing , especially among children. Asthma imposes an unacceptable burden on health care systems, and on society through loss of productivity in the workplace and, especially for pediatric asthma, disruption to the family. Asthma is a chronic inflammatory condition of the lung airways resulting in episodic airflow obstruction .

Asthma is a common chronic disease, causing considerable morbidity. More than 10 million children had ever been diagnosed with asthma, with 70% of this group reporting current asthma.

Inhalational medications allow high levels of drug concentration into the airways with more rapid onset of action and fewer adverse effects compared to systemic routes.

Objectives: Parental perception about MDI and nebulizers .

II. Methodology:

Questionnaire .

Study Design: Descriptive design involving a cross-sectional study .

Study Setting: The study was conducted at a rural tertiary care hospital and rural health training center attached to it in B G Nagara, Mandya.

Study Population: The population for the study is made up of all outpatient with asthma who are attending the pediatric department and rural health training center clinics within the study area.

Study Period: 12 Months

Inclusion criteria: childrens aged between 2 to 18 years who fulfills the clinical diagnostic criteria of asthma .

Exclusion criteria:

- 1) Congenital Heart Diseases .
- 2) Foreign body aspiration .

Ethical considerations:

Study will be initiated after obtaining institutional ethics committee clearance and written informed consent will be obtained from all the participants. Confidentiality will be maintained by substituting codes for participant identifiers. The data collected will be monitored periodically to ensure the quality.

Sampling and sample size determination: The participants were enrolled in to the study through convenience sampling.

III. Discussion:

Offering appropriate medication and preventive steps, asthma treatment according to guidelines fails frequently. Low adherence to mdi treatment in children with asthma is one of the main reasons why asthma is still associated with significant morbidity.

The knowledge and perception of parents toward this condition affect the treatment strategies in children and more important the adherence to prescribed treatments. Therefore, it is very important for regular assessment of this perception and develops methods for improving them. The aim of this study is to assess the parental perception about mdi and nebulizers differences among the school going population.

The parents thought that there is a difference between mdis and nebulizers with some preference of one tool over the other in some aspects like nebulizer is more effective, less side effect and cheaper than mdi.

A significant relationship was found between the parent perception about the medication and their satisfaction with it and this will affect the adherence of children to medication where thought of that the device is more effective, less side effect, easier to use and with low cost is associated with higher satisfaction scores. Moreover, other factors included a higher level of education would reflect a high score of satisfaction.

IV. Result :

The effect for treatment of asthma through MDI is 28.5% and through nebulization is 56.4%. Side effect through MDI is 42.8 % and through nebulization is 18.8 % . Higher cost to afford MDI is 56% and through nebulization is 43% . And easy to use through MDI is 56.4% and through nebulization is 22.5%.

V. Conclusion:

This study concluded that asthma is more prevalent in females where MDI was the most common treatment used by children. Moreover, most parents had thought that there is a difference between MDI and nebulizer where they thought that nebulizer is more effective, less side effect and cheaper than MDI while they thought that MDIs are easier to be used than nebulizers. Some inadequate perception including that MDI may lead to remain on medication affect the satisfaction of parents. More investigation should be done to study the effect of satisfaction level of parent about one instrument of adherence rate of their children.

Implication:

In this study parental misconception, lack of parental knowledge about inhaled therapy will be addressed. Parents believe that their children can become addicted and dependent on inhalational treatments and to know the effectiveness of nebulizers compared to MDI. Poor adherence leads to ineffective control of the diseases, thus it is necessary to educate parents about the same.

References:

- [1] Alzayed A A, Alotaibi A S, Alfadhli R F, Et Al. (February 25, 2021) Parental Perception About Metered-Dose Inhalers And Nebulizers Differences Among Saudi Arabia. *Cureus* 13(2): E13548.
- [2] Kliegman Rm, Stanton B, Geme J, Schor Nf, Behrman Re. *Nelson Textbook Of Pediatrics*, 2-Volume Set. 20TH Ed. Philadelphia, Pa: Elsevier -Health Sciences Division; 2015.
- [3] Masoli M, Fabian D, Holt S, Beasley R; Global Initiative For Asthma (Gina) Program. The Global Burden Of Asthma: Executive Summary Of The Gina Dissemination Committee Report. *Allergy*. 2004;59:469-78.
- [4] Chan Pw, Debruyne Ja. Parental Concern Towards The Use Of Inhaled Therapy In Children With Chronic Asthma. *Pediatr Int*. 2000;42:547-51.
- [5] Hasegawa K, Tsugawa Y, Brown Df, Camargo Ca Jr. Childhood Asthma Hospitalizations In
- [6] Zaraket R, Al-Tannir Ma, Abdulkhak Aab, Et Al.: Parental Perceptions And Beliefs About Childhood Asthma: A Cross-Sectional Study. *Croatian Med J*. 2011, 52:637-643.
- [7] Conn Km, Halterman Js, Fisher Sg, Et Al.: Parental Beliefs About Medications And Medication Adherence Among Urban Children With Asthma. *Ambulatory Pediatr*. 2005, 5:306-310.