

Awareness of using Metered-dose Inhaler among Caregivers of Pediatric Asthma Patients at King Abdul-Aziz Medical City, Riyadh, Saudi Arabia

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Background

Asthma is a persistent dreaded health associated condition that affects a vast population globally whether in developing or developed countries. Improper usage and incorrect inhalation methods result in reduced deposition of the medicine and thus the disease flares-up. Since there is a paucity of evidence about the knowledge of the Saudi population especially pediatric caregivers regarding the use of metered-dose inhalers, this study aims to evaluate the level of knowledge among caregivers of pediatric asthma patients to administer metered-dose inhaler at King Abdul-Aziz Medical City, Riyadh, Saudi Arabia.

Methods

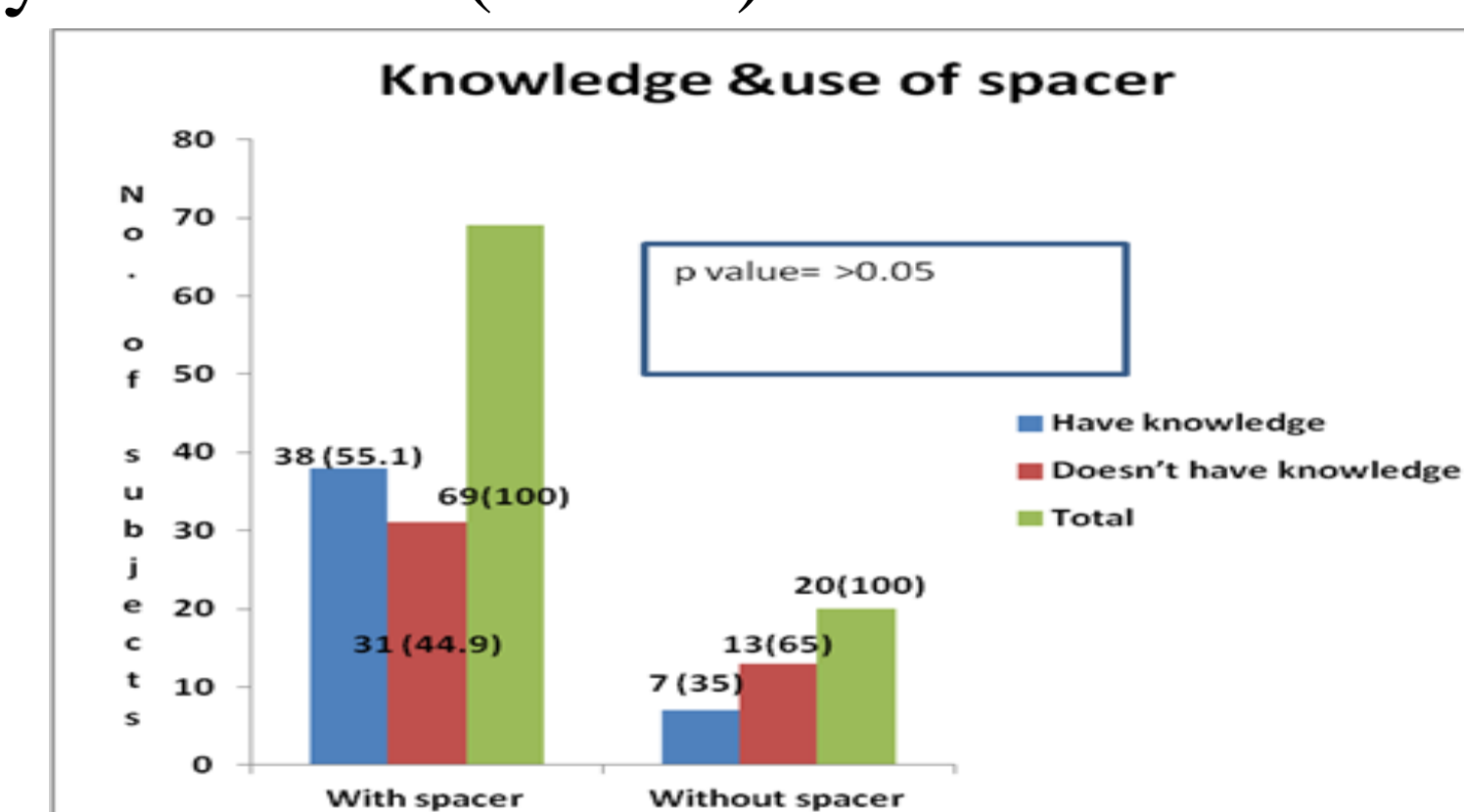
The study was conducted in the pediatric outpatient department at King Abdul-Aziz Medical City, Riyadh, Saudi Arabia. The design of the study was cross-sectional. The sampling technique was convenience sampling. Data was collected in the form of a questionnaire which contains 10 questions, and they were close-ended questions. A printed questionnaire was distributed to all the parents or the caregivers who had used a metered-dose inhaler or were use it at the same time as the study. Institutional Review Board (IRB) approval was obtained before starting the data collection and the confidentiality of the participants was maintained throughout the study.

Results

A total of 90 patient caregivers after proper inclusion & exclusion criteria were included in this study. The majority (92.2%) of the patients were aged > 2 years old and (57.8%) of them were diagnosed with asthma or an asthma exacerbation episode. (56.7%) of the patients had an emergency department visit in the previous year. The common trigger for asthma attack was common cold (81.1%).

(54.4%) of patients started using MDI in age < 2 years. 69 patients have used a spacer with MDI and 38 of them know how to use it properly.

62 (68.9%) patients were instructed to use MDI by physicians while 11 (12.2%) patients were instructed by RTs. Out of the total number of patients, the most common medication used was Ventolin (86 patients) used it and they constitute (95.6%) of the total population.



Discussion

This study identified the major causative factor to trigger acute asthma exacerbation which is the common cold (78.9%).

In this study the majority of the subjects who required emergency admissions aged more than 2 years.

This fact contradicts the Scandinavian study which reports that hospitalization for asthma and wheezing disorders are most common during the first years of life. Ranging from 104 to 10000 children in the age group 1-2 years to 7 children out of 10000 in the age group 9-13 years (1). Regarding the gender, in this study male patients had more asthma attacks and Emergency department visits than females. This result does not correspond with another study in which female patients report more asthma attacks than male asthma patients (2)(3)(4).

In this study, most of the subjects received Salbutamol without Ipratropium Bromide, which is not a recommended in some of the randomized trials, systematic reviews, and meta-analyses where treatment with two to three doses of inhaled ipratropium combined with an inhaled beta-agonist, mostly with moderate-to-severe asthma exacerbations, showed a reduce hospital admissions and improve lung function in children, compared with an inhaled beta-agonist alone (5)(6).

Conclusions

The study concluded that caregivers of pediatric asthma patients had a better knowledge of using MDI with spacer than using MDI without the spacer.

References (optional)



Disclosures

*conflict of interest and funding is none