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Diagnosis and management of childhood asthma: How far we have reached? A survey of pediatrician's knowledge, attitude, and practices from Rajasthan

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Abstract

Background: Despite the development and propagation of guidelines for the diagnosis and management of asthma, a gap remains between current recommendations and actual practice. **Objectives:** To assess the paediatrician's attitude towards asthma guidelines and their adherence to its recommendations. **Materials and Methods:** 131 pediatricians engaged in direct childhood asthma care in state of Rajasthan were subjected to a self-administered questionnaire with 50 questions of which most were multiple choices, aiming at assessment of three important aspects about the involved pediatricians; paediatrician's knowledge, practice and attitude. **Results:** Agreement with asthma guidelines was present with 87% of the studied pediatricians, however those who are not in agreement with the guidelines claimed that this was mainly due to patient factors and low socioeconomic status. Poor knowledge was found in 37%, poor practice in 49% and poor attitude in 19% of the studied physicians. Our study revealed that proper prescription of corticosteroids was carried out by only 56% of pediatricians. Significant number of doctors prescribed antihistamines, antibiotics and dietary restrictions on all asthmatic children and nebulisers/inhalers remained under-used. Pediatricians relied commonly on journals, company brochures, and conferences to keep themselves updated. **Conclusion:** The attitude of the majority of the studied pediatricians revealed agreement with the guidelines, while the disagreement was mainly explained by the poor socioeconomic standard of the patients. The degree of poor practice is more marked than that of poor knowledge or poor attitude reflecting resources limitations and application obstacles in the pediatricians's practice.

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Full Text

INTRODUCTION

Asthma is the most common chronic disease in children and unfortunately under diagnosed and undertreated many a times. Poor knowledge and attitudes of treating pediatrician often adds to the misery of patients and contribute to inappropriate management. [1] In spite of the efforts to improve asthma care over the past decade by various agencies including Indian academy of pediatrics, a majority of patients have not benefited from the advances in asthma treatment. The poor adherence to treatment further complicates the scenario which is added by the treating doctor's knowledge and disposition in terms of treatment. [2]

We hypothesized that pediatricians treating the children are still not sufficiently aware about the role of inflammation in asthma and its treatment with systemic or inhaled corticosteroids and also about the different inhalation devices. Hence, we carried out this questionnaire based survey among practicing pediatricians at various levels of health care in Rajasthan, in order to assess the knowledge, adherence to guidelines, and attitude toward national and international guidelines for management of asthma.

MATERIALS AND METHODS

This cross-sectional study was conducted during January 2012-June 2013 among 131 pediatricians (MD/DCH/DNB) who are practicing in state of Rajasthan. We used a self-administered questionnaire with 50 questions, adopted from Salama et al. [3] Majority of the questions were multiple choice questions aiming at assessment of three important aspects about the involved pediatricians; their knowledge, practice, and attitude. There were two sections of questionnaire, first section regarding the basic information like age, sex, qualification, the type of the practice place, ease of using the computer, and access to internet. The second section contained the questions related to the knowledge (17 questions), practices (14 questions) and attitude (4 questions). The pediatricians were contacted personally and the confidentiality of information was guaranteed. The questionnaires were anonymous and verbal consent was obtained from each candidate before each questionnaire.

RESULTS

Of the 325 pediatricians contacted, 226 pediatricians consented to participate however only 131 (57%) pediatricians responded to survey. The demographic information is provided in [Table 1]. The male: female ratio was 3.5:1. The qualification of pediatrician was as follows: MD - 59%, DNB - 27% and DCH - 14%. Almost half of the pediatricians (46%) were practicing in urban areas and one-fourth (24%) were in multispecialty hospitals. Only 33% pediatricians were computer friendly and 45% had access to internet. Surprisingly, only 10% of pediatricians have heard about the GINA guidelines and 15% pediatricians reported to gain their knowledge regarding asthma management from medical representatives and continuing medical educations.[Table 1]

[Table 2] shows that majority (91%) of pediatricians reported asthma diagnosis to be based on clinical assessment while lab investigations and radiological investigations were desired by 13% and 15%. 65% pediatricians believed spirometry to be helpful in diagnosis. The 57% pediatricians reported to use peak flow meter and only 37% advised spirometry for diagnosis and monitoring the asthma. A large number of pediatricians (57%) did not believe in long-term controller therapy for asthma and 90% believed relievers to be given for long-term management. Almost half of the pediatricians (45%) believed in elimination of some or other foods for asthma management.[Table 2]

About 44% still did not report prescribe medications according to degree of severity 26% gives steroids as controller for short-term as shown in [Table 3]. Short acting bronchodilator (asthalin) was prescribed by 42% for long-term management and 20% pediatricians were prescribing oral preparations. Almost all (93%) pediatrician prescribe leukotriene antagonists in asthma management. A large proportion of practitioners prescribe antibiotics (63%), cough syrups (61%), and antihistamines (66%) for asthma management in children. Unfortunately, only 15% pediatricians reported to follow-up their patients.[Table 3]

About 87% pediatrician reported to hear about asthma guidelines, but only 35% had attended asthma training module conducted by IAP. Agreement with asthma guidelines was present in 76% of the studied pediatricians while rest (24%) did not believe in asthma guidelines. Those who are not in agreement with the guidelines claimed that this was mainly due to patient factors, firstly the poor socioeconomic standard of the patient 66% and secondly due to poor patient compliance

76%. Patient education was not important in their opinion and only 21% themselves used to educate the parents regarding asthma as shown in [Table 4].{Table 4}

Overall up to 90% (19-90%) pediatrician's had poor knowledge based on various parameters to assess the knowledge regarding the diagnosis and treatment of asthma. Furthermore, majority (24%) had poor attitude toward patient education. Irrational practices even after having the knowledge was found in up to 93% (42-93%).

DISCUSSION

This study was carried out to assess the current situation as regard pediatrician's awareness and attitude toward national and international guidelines and their adherence to its recommendations. Among the 131 pediatricians who participated in this survey, 59% were MD, 27% DNB, and 14% were DCH. 49% of the clinicians were working in governmental hospitals, 37% clinicians work in private clinics, and 10% in medical colleges.

Knowledge assessment in the studied pediatricians group revealed that the most important source for information about the guidelines was lecture attendance and only 35% of studied pediatricians have attended IAP asthma module, it reflects a limited capacity of the pediatrician for self-education. In agreement, a survey by Gharagozlou et al., in Iran reported that awareness about the standard guidelines among the Iranian pediatricians who participated in the survey was low. [4]

The awareness of using peak expiratory flow meter in diagnosing asthma only 54% however, when coming to the practice only 37% of them use it in their practice for diagnosing this was in agreement with Gharagozlou et al. Most of the pediatricians (70%) agreed that corticosteroids should be used as controller and the dose should be tailored according to asthma severity (56%), but 71.1% of them do not know how to assess asthma severity. Similarly, Christakis et al., and Rea et al., [5],[6] surveyed the pediatrician's attitude toward guidelines and they reported barriers to adherence mainly lack of agreement with specific recommendations.

A large number of pediatricians (45%) still believed to eliminate some food items in children with bronchial asthma. The practice of prescribing bronchodilators as long-term therapy still present in 42% of the pediatrician and 20% of them prescribe it in syrup form, moreover, 60% of the pediatricians were prescribing antibiotics routinely as a therapy for childhood asthma, which is in disagreement with the recommendations of the guidelines. It is noticeable that poor practice in studied pediatricians was more marked than poor knowledge. Cloutier et al. [7] and Price et al. [8] stressed on impact of education interventions on physicians caring for patients with asthma in poor urban areas.

Limitations

Totally, 325 pediatricians were approached and 226 pediatricians consented to participate however only 131 pediatricians responded to survey which is only 57%. Hence, this sample may not be representative of all 1200 pediatricians practicing in the state. Second, pediatrician's adherence to asthma guidelines was based on self-report, which might not reflect the actual adherence as happens in all surveys.

Implications

Interventions tailored to improve practices like introduction of practical workshops, and interactive seminars to improve inhalation practices and overall management of children with asthma is needed.

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