ARQUIVOS DE ASMA, ALERGIA E IMUNOLOGIA

Childhood asthma: is adherence to treatment essential for achieving control?

Asma na infância: a adesão ao tratamento é fundamental para atingir-se o controle?

Dirceu Solé[1]

In recent decades, both the prevalence and severity of allergic diseases have increased worldwide and in all age groups, especially in childhood. Asthma remains the most prevalent chronic lung disease in children and adolescents and requires special care, especially regarding asthma education. Although new asthma phenotypes and endotypes have been increasingly identified with the aim of providing a more effective and lasting targeted therapy, disease control is still the ultimate goal of asthma treatment.[1]

The scientific literature unanimously agrees that poor adherence to asthma treatment by patients is the main cause of exacerbations and poor disease control, which results in high health care costs and has been identified as a factor responsible for asthma deaths.[1] According to the Global Initiative for Asthma (GINA), symptom reduction and minimization of future risks of unfavorable outcomes are the main focus of asthma control assessment. This assessment should be conducted every 4 weeks and seek to identify possible risk factors for exacerbations, persistent airflow limitation (lung function assessment at specific times), adherence to the established therapeutic regimen, and drug side effects.[1]

The GINA also recommends that follow-up consultations for patients with asthma should assess the level of symptom control and whether the inhalation technique is adequate, monitor adherence to the prescribed regimen and adverse effects, verify if the patient is following the written action plan, and identify current attitudes/behaviors and goals to be achieved in relation to asthma. The presence of comorbidities (rhinitis, rhinosinusitis, gastroesophageal reflux, obesity, depression/anxiety, among others) should also be assessed.[1]

When faced with a patient with poorly controlled asthma, evaluating the factors that may contribute to poor treatment adherence is crucial, especially (a) factors related to the medication/treatment regimen (difficulties using inhaler device, multiple times per day, multiple different inhalers); (b) unintentional poor adherence (misunderstanding about instructions/recommendations for medication use, forgetfulness, absence of daily routine, cost); and (c) intentional poor adherence (perception that treatment is not necessary, denial or anger about asthma or its treatment, inappropriate expectations about treatment/disease, concerns about side effects, dissatisfaction with health care providers, stigmatization, cultural or religious issues, cost).[1]

The method used to quantify patients' adherence to a proposed regimen with the aim of detecting poor treatment adherence and promoting changes in this modifiable behavior should also be carefully considered. Several methods have been proposed to assess/monitor adherence to asthma treatment

1. Professor Titular e Livre Docente da Disciplina de Alergia, Imunologia e Reumatologia, Departamento de Pediatria, Universidade Federal de São Paulo - Escola Paulista de Medicina. Diretor de Pesquisa da Associação Brasileira de Alergia e Imunologia (ASBAI). Diretor Científico da Sociedade Brasileira de Pediatria (SBP), São Paulo, SP, Brazil.

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in adults and children, such as: (a) subjective assessment tools – medical assessment, family/patient assessment, self-report questionnaires such as the Morisky Scale and the Medication Adherence Report Scale for Asthma (MARS-A); (b) objective tools such as prescription data, canister weight, dose counter, directly observed therapy, and nurse-led home visits; and (c) electronic monitoring devices (DOSER CT®, SmartInhalers®, Propeller Health or Asthmapolis Device®, Inhaler Compliance Assessment device). It should be noted that these methods have several flaws, and even gold standard methods such as electronic monitoring devices have limitations.[2,3]

In this issue of the Arquivos de Asma, Alergia e Imunologia, a cross-sectional observational study assessed the importance of asthma treatment adherence in a pediatric population (n = 98) who received care in an experienced center for at least 6 months and associated it with disease control (82% of patients had moderate-to-severe asthma) and other clinical variables.[4] Questionnaires on medication adherence (MARS-5, simplified version),[2] environmental control,[5] and popular beliefs about asthma[6] were used during follow-up assessments, in addition to asthma control assessment by the Asthma Control Test (ACT).[7]

Study participants, who mostly had moderate-to-severe asthma, were being treated with inhaled corticosteroids, were polysensitized, were instructed on environmental control, and were encouraged to practice physical activities.[4] Treatment adherence was lower among patients who believed in one or more myths about asthma and its treatment. Adequate adherence to environmental control measures was identified in 51% of patients. Complete control of asthma as assessed by the ACT was significantly associated with adequate medication adherence.[4]

The study shows that despite continuous reinforcement of the therapeutic measures (environmental control, medications, physical activity, mental health, among others) recommended during patient follow-up in experienced centers, the rates of treatment adherence are good, but not optimal. The adherence rate was certainly influenced by asthma-related beliefs and myths, as pointed out by the authors. In this sense, the decision on the choice of medication (inhalation, device), if shared with the patient and their family, should improve patient safety and confidence in the treatment. This act reflects the key role of asthma education, especially for children.

In conclusion, despite recent advances in the monitoring of asthma treatment adherence, there is still a long way to go to develop an optimal monitoring tool. Adapted and validated self-monitoring questionnaires for young children with asthma, in addition to more objective measures, are still needed for routine health care practices that are hard to obtain.

References

1. 2022 GINA Main Report. Available at: https://ginasthma.org/wp-content/uploads/2022/07/GINA-Main-Report-2022-FINAL-22-07-01-WMS.pdf. Accessed in September 2022.
2. Cohen JL, Mann DM, Wisnivesky JP, Home R, Leventhal H, Musumeci-Szabó TJ, et al. Assessing the validity of self-reported medication adherence among inner-city asthmatic adults: the Medication Adherence Report Scale for Asthma. Ann Allergy Asthma Immunol. 2009;103:325-31. doi: 10.1016/s1081-1206(10)60532-7.
3. Pearce CJ, Fleming L. Adherence to medication in children and adolescents with asthma: methods for monitoring and intervention. Expert Rev Clin Immunol. 2018;14(12):1055-63. doi: 10.1080/1744666X.2018.1532290.
4. Serrano RA, Campos IG, Aroni BP, Lana J, Riedi CA, Chong-Neto HJ, et al. Avaliação da adesão ao tratamento da asma em crianças: a influência do atendimento especializado. Arq Asma Alergia Imunol. 2022;6(3):360-8.
5. Jentzsch NS, Camargos PAM, Melo EM. Adesão às medidas de controle ambiental na asma. Rev bras alerg imunopatol. 2002;25(6):192-9.
6. Roncada C, Oliveira SG, Cidade SF, Rafael JG, Ojeda BS, Santos BR, et al. Asthma treatment in children and adolescents in an urban area in southern Brazil: popular myths and features. J Bras Pneumol. 2016;42(2):136-42. doi: 10.1590/S1806-37562015000000166.
7. Roxo JP, Ponte EV, Ramos DC, Pimentel L, D'Oliveira Júnior A, Cruz AA. Portuguese-language version of the Asthma Control Test. J Bras Pneumol. 2010;36(2):159-66. doi: 10.1590/s1806-37132010000200002.