

## EDITORIAL

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# Alternative Medicine and Asthma, What Is the Evidence?

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Asthma, as an old disease known for centuries, has been described in medical literature from Greece, Egypt, Iran, China, India and other old nations.<sup>1</sup> It is an immunological process involving at least 14 cell types with more than 230 substances involved in the inflammatory processes.<sup>2</sup> Recent progress in molecular immunology and anecdotal clinical information has made it clear that in fact, asthma is not a single disease entity, but it is a syndrome with various clinical phenotypes, endotypes and genotypes. Although some work has been done in this respect, further researches are needed to better define the clinical and immunological profiles to develop specific drugs which can block ongoing inflammatory cascades.<sup>3,4</sup> For centuries, people living with asthma have used diverse traditional drugs and medical routes to relieve their symptoms. The origin of many current asthma medications goes back to these experiments, for example atropa belladonna, datura stramonium, ammi visnaga, caffeine, theobromine, theophylline, khellin, ipecacuanha, and ephedra sinica have been used for centuries alone or in combination for relieving bronchospasm, but many side effects have been reported and their efficacy has been limited.<sup>1,5</sup> Scientific investigations in immunologic processes of asthma today, have enabled us to have more powerful and more effective drugs to control the disease, but cure of this disease is still very difficult due to the lack

of complete understanding of the disease processes, industrialization, occupational hazards, mental tension, immunological cascades and complexity of human body; and also ongoing asthmogenic activities of human being such as air pollution (indoor, outdoor), and altered living style especially in developing countries.

The fundamental picture of asthma is incurability of this disease and need for long term drug use for control of symptoms. Poor or non-compliance to medications is a major factor in morbidity and mortality of asthma like other chronic diseases and has both patient and health system aspects.<sup>6</sup> Stepwise treatment of asthma according to valid and evidence-based approaches as defined by Global Initiative for Asthma (GINA), British thoracic society, National Asthma Education and Prevention Program (NAAEP), and etc. in order to achieve the control of asthma is based on using the most effective controller drugs with the least price and the least number of medications. Price and number of drugs are major determinants of asthma control to reach a good quality of life with avoiding non-compliance and drug side effects. Drugs and other modalities used in alternative-complementary medicine are not cheap and mostly not supported by insurance systems. For example, in one report from UK in 1995, the cost of first and subsequent visits for acupuncture were 35 and 20£; for chiropractic were 39 and 16.5£, for homeopathy were 40 and 20£ and for osteopathy were 19.5 and 18£. At the moment, the value of alternative medicine in asthma is not clear and in few reviews and meta-analyses has not been established<sup>7-20</sup> except in few end points.<sup>21-23</sup> Unfortunately most studies had

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poor quality and did not have enough statistical power to emphasize routine use of alternative/complementary medicine in control of asthma.<sup>11,18</sup>

Good education to patients about the nature of asthma, to physicians for implementation of evidence-based guidelines and to health policy makers to provide facilities especially effective cheap drugs in all parts of health system are the best ways to achieve asthma control.

In addition, increasing the number and price of treatment with possible increase in drug side effects and interactions is another danger. In countries with poor health system and poor education (both to physicians and patients), non-compliance to standard approved therapies and increasing demand for the alternative medicine, as has been reported as by Arzu Hocaoglu Babayigit from Turkey,<sup>23</sup> should be anticipated. Health authorities should be pushed to facilitate access of patients to current approved therapies especially drugs with proper price and also re-enforce education of physicians and patients.

In addition, prevention of inappropriate practice of alternative medicine is another point that helps patients by decreasing cost and possible morbidities.

In the present situation, where the adherence of asthma patients to drugs especially inhaled corticosteroids (the major controller drug) is poor and is <50% in children, and 30-70% in adults, any medical practices including alternative/complementary medicine should not be propagated.<sup>24</sup> It is apparent that non-biased good designed, double-blind, placebo-controlled studies in appropriate number of patients and control groups are needed to answer some un-answered problems which have not been solved in asthma, with special attention to inflammatory cascades and cytokines.<sup>10, 25</sup>

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