Is Asthma Control Really More Difficult to Achieve in the Elderly Patient?

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Despite significant advances in our understanding of asthma and the development of new treatments and management strategies, this common condition too often remains uncontrolled [1, 2]. This is particularly true for elderly asthmatic patients, who, compared to younger patients, show an increased asthma-related morbidity and mortality [3, 4]. Although often confounded with other conditions such as chronic obstructive pulmonary disease (COPD) or cardiac problems, asthma can affect between 4.5 and 12.7% of the elderly population [5, 6].

With the increasing life expectation observed in most countries, there is a marked interest to know more about how aging could influence respiratory health [4–6]. Aging influences not only respiratory function but also the immune response to infectious agents and the environment [7, 8]. It can also contribute to the modulation of pathological processes such as those associated with asthma or COPD, therefore influencing clinical features and treatment responses. In this regard, a specific phenotype of ‘asthma in the elderly’ is being increasingly characterized [4, 6]. However, not only can the normal physiological changes associated with age contribute to make asthma more severe, many management deficiencies have also been documented in elderly asthmatic patients. These include poor recognition of symptoms, poor adherence to therapy and difficulties associated with alterations in intellectual functioning, particularly memory, in addition to hearing loss, coordination problems affecting inhaler technique as well as psychological (e.g. depression) and socioeconomical problems. The increased

prevalence of comorbidities and sometimes the complex polypharmacy prescribed also contribute to poor asthma control and/or medication-associated side effects in this population.

In the past, elderly patients were usually excluded from studies on asthma, so there is an urgent need to look at the influence of age on the response to management strategies of this condition and at possible ways of reducing its burden. Multiple future research needs on this topic have been detailed in recent reports [4, 6].

In the study by Ponte et al. [9] recently published in this journal, 401 steroid-naïve patients, predominantly women and with mostly long-standing (particularly in the older patients), uncontrolled asthma, were followed up for 1 year. The authors conclude that older age at enrolment does not predict asthma control or emergency department (ED) visits at follow-up if asthma is treated properly, even when lung function is reduced. There was a notable median reduction of ED visits at follow-up (98%) in the group of subjects <55 years of age and in those >55 years (92%; $p = 0.02$), suggesting a marked effect of the proposed interventions. There was no significant difference between the 2 groups. Age did not predict symptom control, number of ED visits, hospital admissions or improvement in lung function at follow-up, and the intervention resulted in similar control and improvement in quality of life in both groups.

In the above study, older subjects had poorer lung function and less severe rhinitis at the last visit (i.e. after 1 year). The observation of a poorer lung function in old-

er patients has been reported previously and it may reflect structural changes in the airways over time, particularly if asthma is uncontrolled [4, 6, 10]. However, despite poorer function, the study suggests that in older asthmatic patients who receive proper asthma management, particularly the regular use of inhaled corticosteroids (ICS), asthma control can be improved and acute care needs reduced [9].

Many factors could explain the marked improvement in asthma outcomes in both groups studied. It is important to note that there was much room for improvement, as the patients had uncontrolled asthma with frequent ED visits and even hospital admissions. Furthermore, all were offered free regular controller medication. Maintenance medication like ICS is underused in elderly patients. As seen in the Brazilian cohort, whatever the age of the patients, the provision of ICS should result in favourable clinical outcomes. Furthermore, adherence to therapy is a common weakness of care, particularly in the elderly, so the relatively close follow-up offered during the study, i.e. 5 visits over a period of 1 year, favoured adherence to therapy [11, 12]. Regular medical review is another factor that is considered to help maintain asthma control, in addition to education and the provision of an action plan for the management of asthma exacerbations [13]. It must also be noted that in the study by Ponte et al. [9], only patients with at least 80% adherence to medication were included in the analysis.

Although current guidelines suggest to prescribe an ICS as the initial treatment of asthma, in the present study, it included inhaled budesonide (800 µg/day) and formoterol (24 µg/day) plus an inhaled short-acting β₂ agonist on demand [14, 15]. We have, however, little data on the best choice of initial treatment in older asthmatic

patients. There is a need to explore whether ICS plus a long-acting β₂ agonist could provide additional benefits in this population, with the more severe airway obstruction observed and the more neutrophilic or mixed airway inflammatory phenotype [10].

Other factors like the documentation of comorbidities could also have influenced the asthma outcomes. Recognition of these conditions, particularly those affecting asthma control, is a key recommendation in current guidelines [14–16]. Of note is that in the study by Ponte et al. [9], the older subjects with asthma had few symptoms of rhinitis; this was possibly related to a lower prevalence of atopy.

With regard to the small difference in the outcomes reported, we should say that a wide range of care deficiencies observed in the elderly population was addressed, but also that the patients in the older group were not actually very old (>55 years), with a more marked difference in patients >70 years being likely. The older patients had initially less ED visits than the younger ones. Nevertheless, this report stresses a need to offer this population a comprehensive adapted approach, taking into account the possible difficulties associated with asthma management in the elderly [17–19]. It also shows that, even in younger patients, such an approach is associated with an impressive improvement in their condition. We still need to still explore whether this is the case in much older patients, especially with the increasing percentage of this age group in the populations of many countries.

In conclusion, it is reassuring to see that despite asthma phenotypic changes in the elderly, adequate asthma management can be successful in markedly improving asthma control and reducing acute health care needs.

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