Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

It is notable that patients who administered EAI in the community had similar improvements in confidence compared with patients who administered EAI under a medically-supervised OFC. This finding has implications for community allergists, when OFC resources may be limited, to illustrate to families that using an EAI in the community to gain confidence is just as useful as supervised in-office. These findings could be applied to other clinical areas where patients with food allergic reactions present—for example, emergency departments and emergency medical services.

Our data revealed that 11.1% of respondents to the follow-up survey used the EAI in the year after their OFC. Similarly, a study by Kansen et al[1] of children diagnosed with peanut allergy by means of a double-blind, placebo-controlled food challenge found that 29% had severe allergic reactions to a peanut that was untreated over a 3-year follow-up period, representing a 9.8% annual rate of reaction that was higher than typically thought.

Our study is limited in that there could be selection bias in responding to the follow-up questionnaire, with patients administering epinephrine in the community being more likely to respond than those not administering epinephrine, artificially inflating the rate of EAI use in the year after the OFC.

In conclusion, our study found that the benefits of supervised self-administration (or parent administration) of the EAI during OFC on confidence using the EAI are sustained after 1 year. In addition, regardless of the setting of the EAI administration, both OFC and community locations provided equal benefit to self-confidence (or parent confidence) using the EAI compared with those not having the opportunity. These data highlight the value of EAI self-administration after 1 year, and that encouraging this practice as a health care provider in the allergy clinic and in other clinical and community settings is paramount.

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Clinical course and outcomes of patients with asthma hospitalized for severe acute respiratory syndrome coronavirus 2 pneumonia

A single-center, retrospective study

Pneumonia caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is a newly recognized illness that has spread rapidly from Wuhan to other provinces in the People's Republic of China and around the world. Italy was one of the most affected countries. From February 2020, Lombardy (northern Italy) was the most affected region by the coronavirus disease 2019 (COVID-19) infection, with a total number of 93,990 positive cases and a total number of 16,302 deaths (data as of July 2, 2020). In particular, Brescia was 1 of the provinces of Lombardy most affected by the pandemic.

Data on the clinical characteristics and outcomes of patients having asthma with SARS-CoV-2 infection are scarce but are of paramount importance to evaluate the relationship between COVID-19 and asthma. Given the characteristics of the virus, one would expect to observe an increased prevalence of asthma and wheezing exacerbations in patients having COVID-19 with allergy and asthma comorbidity—a typical consequence in the case of a viral respiratory infection.[1] In this single-center, observational study, we investigated patients with asthma with confirmed SARS-CoV-2 pneumonia who were admitted to our hospital (Fondazione Poliambulanza Istituto Ospedaliero, Brescia, Italy), which is 1 of the designated hospitals to treat patients with SARS-CoV-2 pneumonia. We retrospectively evaluated the data of patients with asthma, from February 20, 2020 to April 20, 2020, who had been diagnosed as having SARS-CoV-2 pneumonia. Asthma was identified as diagnosed by physicians and by the standard criterion used for several real-life studies; in most of our cases, the diagnosis was supported by the results of previous historical standard spirometry with reversibility test with albuterol or methacholine challenge. We evaluated a total of 1043 hospitalized patients who received a positive test result for COVID-19 (men, 704; women, 339; age range, 14-91 years) with only 20 patients with asthma (men, 8; women, 12; age range, 41-77 years). None of the 20 patients were smokers or ex-smokers, and only 1 was an immigrant (woman, aged 47 years from Ghana; arrived in Italy 10 years before with no

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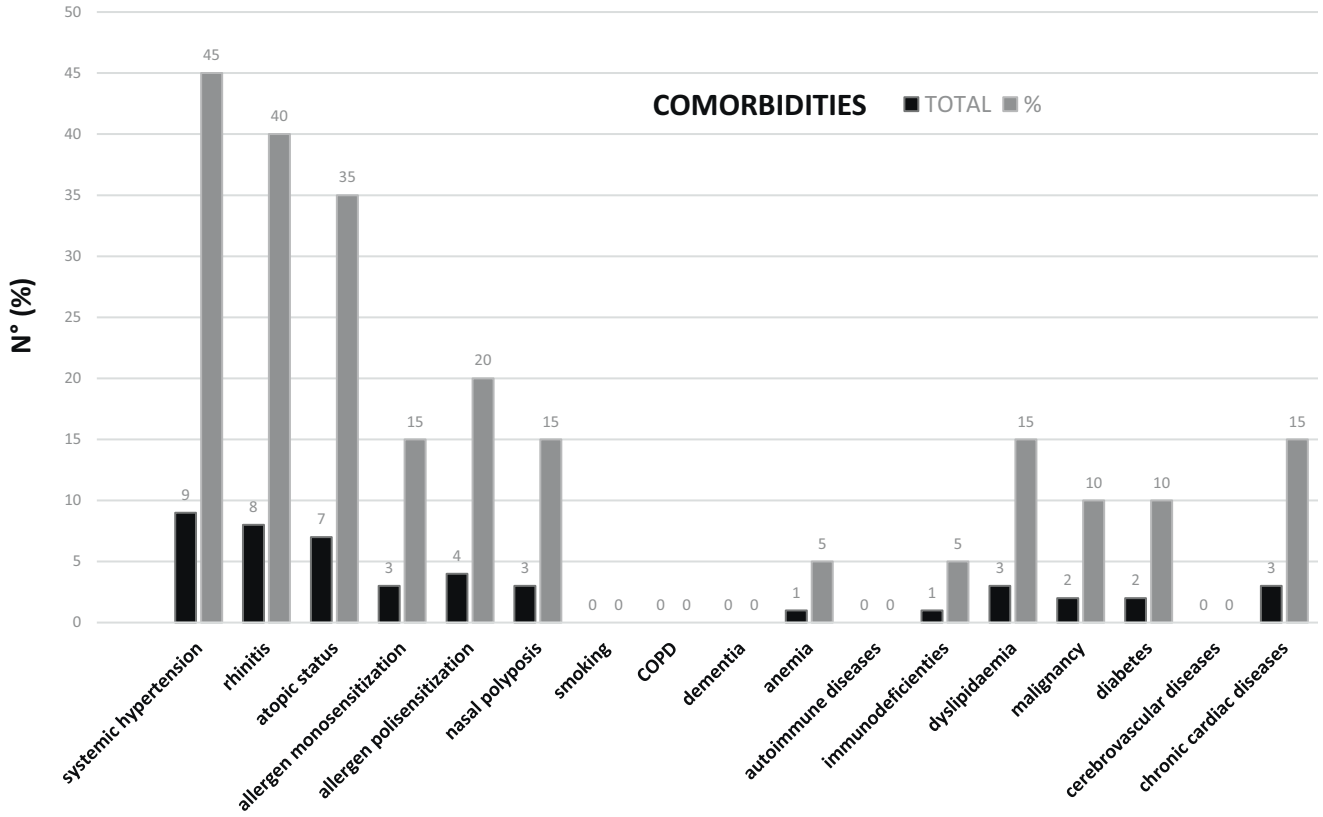

Figure 1. Comorbidities of patients with asthma who were hospitalized for coronavirus disease 2019. COPD, chronic obstructive pulmonary disease.

previous history of sensitization to aeroallergens and/or nasal polyposis).

Of the 20 patients with asthma, 6 (30%) had no other comorbidities. The most frequent comorbidity was systemic hypertension (40% of the total cases) (Fig 1). The percentage distribution of lung parenchyma involvement derived from the computed tomography imaging data was as follows: (1) less than 25% (9 patients); (2) 25% to 50% (7 patients); (3) 50% to 75% (2 patients), and (4) greater than 75% (2 patients). None of the 20 patients had an evident exacerbation of asthma symptoms or objective evidence of bronchospasm on chest auscultation. With regard to antiasthmatic therapies taken by patients before admission to the hospital, we have documented the following treatments: (1) 15 patients (75%) took a preestablished association with long-acting β-agonists plus inhaled corticosteroids ICS; (2) 2 patients (10%) took inhaled steroid only and short-acting β-agonist on demand; (3) 4 patients (20%) took oral steroid at low doses (prednisone, 5-7.5 mg/d); and (4) 4 patients took (20%) montelukast (10 mg/d). No patients were taking tiotropium, biological agents, or allergen-specific immunotherapy. Of the 20 patients, 3 were transferred to the intensive care unit from the internal medicine area owing to worsening of the clinical picture and respiratory failure. A total of 2 fatal cases (2 women, aged 66 and 77 years, respectively) were recorded, both of whom were not related to the clinical condition of asthma. Both were moved to the intensive care unit and died from acute respiratory distress syndrome. Compared with the control group of patients without asthma hospitalized for COVID-19, the mortality in patients with asthma was much lower (10% vs 22.6%).

The prevalence of asthma in our hospitalized patients with COVID-19 was particularly low (1.92%) when compared with the prevalence of asthma in the general population of Italy (6.1% men and 5.49% women, 6.64% total)[2] or Europe (4%-7%).[3] This observation is surprising if we consider the following: (1) the chronic inflammatory infiltration and the airway dysfunction characterizing asthma; (2) the close association between asthma and respiratory viral infections; (3) the increased frequency and severity of lower respiratory tract infections in patients with asthma; and (4) the influenza-related increased morbidity and community-acquired pneumonia**.** We can speculate that patients with a chronic respiratory disease such as asthma should be at increased risk of SARS-CoV-2 infection with worse clinical outcomes, but data, thus far, do not support this. In a study performed in Wuhan, electronic medical records including demographics, clinical manifestation, comorbidities, laboratory data, and radiology reports of 140 hospitalized patients with a confirmed result of SARS-CoV-2 viral infection were extracted and analyzed, and it was noted that asthma or other allergic diseases were not reported by any of the patients.[4] Moreover, Yang et al[5] conducted a systematic review of studies to evaluate the prevalence of comorbidities in patients diagnosed as having COVID-19 and the presence of underlying diseases in severe patients compared with nonsevere patients. A total of 46,248 participants were included in this meta-analysis. The most prevalent comorbidities were hypertension and diabetes, followed by cardiovascular diseases and respiratory system diseases (2%). Overall, given that the prevalence of asthma in the People's Republic of China is 4.2%, these early studies found that asthma is not a risk factor for SARS-CoV-2 infection. Furthermore, Richardson et al[6] evaluated characteristics, comorbidities, and outcomes among 5700 patients hospitalized with COVID-19 in New York City and found no increase in hospitalizations among patients with asthma; indeed, the reported percentage (9%) is in line with the annual American data.

Beyond the People's Republic of China and the United States, looking at the recent data from Italy, among the 355 patients who died because of SARS-CoV-2, asthma was not listed as a relevant comorbidity.[7] Our data seem even more impressive if we consider that

the COVID-19 pandemic in northern Italy coincided with the start of the new pollen season, and therefore, with the periodic annual increase in the cases of seasonal allergic asthma. An intriguing hypothesis is that having asthma protects against SARS-CoV-2, perhaps through a different pattern of immune response elicited by the chronic disease itself.[8] More recently, Jackson et al[9] reported that respiratory allergy and controlled allergen exposures are each associated with significant reductions in the angiotensin-converting enzyme 2 expression; it is noteworthy that nonatopic asthma was not associated with reduced angiotensin-converting enzyme 2 expression. Another possibility is that therapies used by patients with asthma can reduce the risk of infection. Recently, inhaled corticosteroids alone or in combination with bronchodilators have been reported to suppress coronavirus replication and cytokine production.[10]

In conclusion, according to our data, it seems that asthma is not a relevant risk factor in the development of COVID-19 infection. This study confirms that asthma is not in the top 10 comorbidities associated with COVID-19 fatalities, the more common of which were obesity, diabetes, and chronic heart disease.

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The relationship of race and aeroallergen sensitization in a pediatric urban allergy clinic

Urban populations experience disproportionately high rates of asthma morbidity, especially among those of Black or African-American and Hispanic descent,[1] and indoor allergen sensitization has been implicated in poor health outcomes.[2] The prevalence of rhinitis is also higher in urban compared with rural populations.[3] Newark has one of the highest rates of childhood asthma in New Jersey, with increased associated emergency department visits and hospitalizations.[1] In our previously uncharacterized urban population, we sought to evaluate the relationship between ethnicity (including stratifying different minority groups), allergen sensitization, allergic comorbidities, and local geography among children with asthma or rhinitis or both.

Patients aged 1 to 18 years with physician-diagnosed asthma or rhinitis or both who were seen between January 2, 2013, and January 2, 2019, in a pediatric allergy and immunology clinic in Newark, New Jersey, were examined. The study was approved by the institutional review board.

The electronic medical records of 296 patients who met the inclusion criteria were reviewed for data pertaining to demographics (sex, age at last visit, race, ethnicity, and residential Zone Improvement Plan [ZIP] code), allergic diagnoses (asthma, rhinitis, atopic dermatitis, and food allergy), and aeroallergen sensitization. Race was self-reported by their parents on a registration intake form and categorized as White, Black or African American, Hispanic, or other.

Aeroallergen sensitization was defined as allergen-specific immunoglobulin E (IgE) testing greater than 0.1 IU/mL (ImmunoCAP fluoroenzyme immunoassay; Thermo Fisher, Waltham, Massachusetts) or skin prick testing wheal response greater than or equal to 3 mm larger than that elicited by the negative control. Along with total serum IgE levels, the allergens that were evaluated included the following: (1) pollen (trees, grass, and weeds), (2) animal (cat, dog), (3) dust mite (*Dermatophagoides farinae* and *Dermatophagoides pteronyssinus*), (4) mold (*Alternaria tenuis*, *Aspergillus fumigatus*, *Cladosporium herbarum*, *Penicillium notatum*), and (5) mouse and cockroach mix (American and German).

The frequencies of specific allergen sensitivities and combinations of sensitivities were compared with reported physician-diagnosed allergic sensitivities by means of cross-tabulation.

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