Current Approaches to Asthma In 2021

Asthma remains one of the leading causes of chronic morbidity and mortality at the global level, and it represents a major problem for public health. It also creates a significant economic burden both as a chronic and acute condition [1, 2]. The burden of asthma is likely to increase over the next several years. This proposed hot-topic issue will provide an update on some pathogenic mechanisms and the management of patients with asthma. Asthma is currently regarded as a condition with several phenotypes, the number of which is constantly changing.

This, in turn, leads to personalized medicine and proper assessment of asthma patients is now the basis of an accurate treatment strategy.

Asthma leads to pulmonary and extrapulmonary complications [3, 4]. Comorbidities may change the asthma phenotype or represent the same pathophysiological process [4]. It is important to assess the asthma comorbidome as it provides valuable information to the caregiver and improves the quality of life and outcomes in asthma.

One of the most studied conditions is asthma-COPD overlap (ACO) [5]. ACO has undergone a long path since its initial introduction. Taking into account the recent recommendations and new data, there is a need for an up-to-date overview of this condition.

Lung cancer is traditionally associated with smoking and COPD; however, asthma similarly represents a risk factor for lung cancer [6]. The underlining mechanisms are complex and often multifactorial. The emergence of several phenotypes and endotypes makes it more complicated to accurately assess the real risks that a patient with asthma possesses.

Asthma is a heterogeneous disease and there is constant research of the possible biomarkers and methods to diagnose both asthma and its phenotypes in order to improve diagnostic accuracy and provide timely management according to the modern recommendations [7]. The analysis of cell count in induced sputum is another promising way to cluster patients with asthma for optimal classification and adjustment of personalized treatment [8].

Bronchial thermoplasty is a method used in many countries worldwide as non-pharmacological management for severe asthma. This method requires rigorous selection and identification of patients who would benefit from this procedure. Modern algorithms and recommendations make it possible for patients to benefit from this procedure with asthma who in spite of advanced therapeutics, have severe asthma [9].

Last but not least is the management of asthma exacerbations which possess a serious risk for mortality [10]. This is a problem worldwide, with estimated 495,000 deaths every year [1]. The vast introduction of non-invasive ventilation (NIV) of asthma patients is the current trend. NIV is a valuable tool that demonstrated its efficiency for COPD and pulmonary edema. It is highly likely that with proper screening, asthma patients are also good candidates for this treatment [11].

Taking into account the recent advances in this field of medicine, this hot-topic issue of Current Respiratory Medicine Reviews is an update on the diagnosis, assessment and management of patients with asthma.

REFERENCES


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