

## More... about chronic obstructive airway and pulmonary vascular disorders

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This current third 2017 issue of *BRN Reviews* concentrates on the three most prevalent chronic obstructive airway diseases that involve both small and large airways. The first review refers to chronic obstructive pulmonary disease (COPD), more specifically to the *Global Initiative for Obstructive Lung Diseases* (GOLD), whose last full report was posted on the GOLD webpage ([www.GOLDCOPD.org](http://www.GOLDCOPD.org)) in November 2016<sup>1</sup>. This was subsequently followed by the simultaneous publication of its complementary Executive Summary in four worldwide major respiratory journals. The three authors, *Claus F Vogelmeier, Gerard J Criner and Fernando J Martinez*, are well-respected members of the international respiratory community and distinguished members of the current GOLD Scientific Committee. They provide a fascinating critical and historical view of the four GOLD Reports (or Revisions) since its seminal version in 2001, with the description of the basic principles, its evolution and progression over the last sixteen years. Originally, the assessment was based exclusively on the degree of airflow limitation, but

respiratory symptoms and exacerbation history are now on the front page as key patient-reported outcomes. This is comprehensively complemented by underscoring prevention and adequate therapy of stable COPD, exacerbations and the complex debate of comorbidities.

The second article is devoted to the timely debate about the use of long-acting inhaled  $\beta_2$ -agonists (LABAs) in bronchial asthma by one of its key opinion leaders, *Paul M O'Byrne*, a long-standing scholar, member and past chair of the *Global Initiative for Asthma* (GINA). The topic is of great interest because, while LABAs are very effective agents in providing symptom relief without associating anti-inflammatory effects, they may increase the risk of asthma mortality if used alone as mono-therapy by patients with asthma. That said, when used together with inhaled corticosteroids (ICS), the ICS/ LABA combination has proven to be almost unbeatable in a majority of asthmatics and to improve asthma control and reduce the risk of exacerbations while reducing

concerns about the risks of severe asthma-related events. This concept is further developed by reviewing several recent randomized safety trials both in adults and children.

The third contribution, from a team of emerging Spanish investigators led by *Miguel Angel Martínez-García, María José Selma Ferrer and Enrique Zaldívar Olmeda*, addresses another hot topic, namely the higher prevalence of bronchiectasis in patients with COPD and severe asthma. Most importantly patients with COPD or bronchial asthma who associate widespread bronchiectasis may represent a clinical phenotype or alike, characterized by greater clinical and functional severity, higher number of exacerbations and, in the case of COPD, greater colonization by potentially pathogenic microorganisms, also showing a poor prognosis. Most tellingly, in spite of the fact that there have not been studies to show a cause-effect relationship among these three conditions as yet, it might be surmised from a pathobiological viewpoint that severe asthma and especially severe COPD can be related to the development of bronchiectasis, an enthralling scientific challenge for the future.

The fourth article by *Martin Stämpfli* and his coworker *Pamela Shen* describes, using an original experimental setting, how cigarette smoking alters the multiple features of bacterial-host connections and postulates that these changes predispose to infection, as smokers fail to control colonizing bacteria in the upper airways. Other contributing factors prone to increase pathogen acquisition within the upper

airways site are impaired mucociliary clearance and increased bacterial adhesion to host cells including the finding that bacterial virulence enhancement in smokers may play a key role as well. These investigators propose to target nasal bacterial colonization as a novel therapeutic pathway to prevent subsequent disease pathogenesis.

Last but not least, *Michael J Krowka*, one of the worldwide experts on the most prevalent liver-induced pulmonary vascular diseases, *i.e.* hepatopulmonary syndrome and portopulmonary hypertension, reviews their principal features. These two challenging liver-lung axis disorders, whose clinical knowledge was poorly recognised till the early 2000s, are masterly described. This paper is intended to update the clinician on the current understanding and management of these two lung-liver entities that have evolved over the last years. Each disorder is dissected into five components, namely diagnostic criteria, screening and clinical presentation; pathophysiology; epidemiology and natural history; medical management; and, implications for liver transplant.

Please take a look at this third 2017 volume. I kindly invite you to the reading of these high-quality papers hoping you will enjoy them.

## REFERENCES

1. From the Global Strategy for the Diagnosis, Management and Prevention of COPD, Global Initiative for Chronic Obstructive Lung Disease (GOLD) 2017. Available from: <http://goldcopd.org>