

Congenital, pediatric and young adult COPD were at the center of the debate held at the “Invisible COPD. Elíseos ‘17. Meetings for Innovation in Respiratory Therapy” symposium organized by ESTEVE in Zaragoza

POOR LUNG DEVELOPMENT IN CHILDREN INCREASES THE RISK OF COPD IN ADULTS

Today, one out of two cases of COPD affects patients who have been unable to fully develop their lung capacity before turning 30 years old

Genetics, infection, asthma, malnutrition and, above all, exposure to tobacco smoke, are factors involved in poor lung capacity development

COPD patients are at double the risk of suffering from cardiovascular diseases and lung cancer

Barcelona, 13 February 2017.- Smoking is the main cause of Chronic Obstructive Pulmonary Disease (COPD), and is responsible for more than 80% of the cases. But it is not the only one. Failing to fully develop lung capacity due to viral infections, malnutrition or asthma in childhood, among other factors, makes the pediatric patient prone to COPD in adulthood¹. This is so in 50% of the patients. Based on a multidisciplinary approach, the “Invisible COPD. Elíseos ‘17. Meetings for Innovation in Respiratory Therapy” symposium organized by ESTEVE had specialists debate on congenital, pediatric and young adult COPD.

According to the National Institute of Statistics², COPD is the fourth cause of mortality in the adult population. This progressive, serious, disabling condition affects 10% of the adult population, that is, about two million Spaniards aged between 40 and 80 years, of which 73% are not diagnosed and do not receive treatment³. Characterized by an inflammation of the airways in response to noxious particle and gas inhalation (mainly tobacco smoke), its major consequence is a permanent alteration of the pulmonary function and a loss of airway elasticity that hinders breathing and increases with age.

“COPD has always been associated with age. This is still so. However, poor pulmonary development also involves a high risk of COPD in adulthood. Intervening factors are genetics, malnutrition, asthma or recurrent infections in childhood, active and passive smoking...”, explained Dr. Alvar Agustí, director of the Respiratory Institute of the Hospital Clínic of Barcelona and president of GOLD (Global Initiative for Chronic Obstructive Lung Disease) guidelines globally agreed to address COPD. “Between 20% and 30% of people with a good pulmonary function but who smoke end up suffering from COPD, and this percentage is higher in people with poor lung development, mainly if they too are smokers”.

For his part, **Dr. Pere Almagro**, Coordinator of the Chronic and Complex Patient Unit of the University Hospital Mutua de Terrassa (Barcelona), pointed out that *“while the lung is fully developed anatomically, its capacity is not the one it should be for the patient’s age”*. This is a hot topic, so much so that the new edition of the GOLD Guidelines⁴ emphasizes for the first time the important role played by abnormal lung growth and development during pregnancy and in childhood, and the increased individual risk of developing COPD. The document also includes strategies for treating major comorbidities such as cardiovascular diseases, and emphasizes the importance of the risk of future exacerbations.

The purpose of the *“Invisible COPD. Eliseos ‘17. Meetings for Innovation in Respiratory Therapy”* symposium was to give visibility to topics that might be overlooked when approaching patients with COPD. Hence the title of this meeting, which was also addressed to other specialists, not only pulmonologists. These, though, are the ones most involved in the treatment of COPD.

A severe exacerbation doubles the risk of infarction

Patients live a long time with associated comorbidities. COPD results in increased predisposition to develop cardiovascular diseases and lung cancer, and also in more chances of contracting recurrent airway infections. **Dr. Agustí** explained that *“COPD causes an inflammatory state that affects the lung and also the rest of the body, including blood vessels. Also importantly, tobacco smoking is not only the main risk factor of COPD, it is also the main risk factor of lung cancer and cardiovascular diseases”*.

Dr. Almagro added that *“patients with less severe COPD are at a higher risk of dying from cancer or cardiovascular disease than the general population. In fact, their risk of having diabetes, high blood pressure or high cholesterol values is twice that of the rest of the population. Evidence also suggests that, after an exacerbation, the risk of myocardium infarction over the following weeks is also doubled”*.

Exacerbations are life-threatening symptom worsening episodes that accelerate the deterioration of the patient’s lung, lead to the poorest prognosis, and place a considerable burden on health resources (hospital and ICU admissions). Fifty percent of cases occur after a respiratory infection. According to **Dr. Almagro**, *“impairment requiring ER or hospital admission results in increasingly impaired pulmonary function and increased mortality over the following 2 to 3 months. In fact, COPD-related mortality is closely related to exacerbations, particularly over the following months”*.

At this point, the costs of COPD in Spain, revised in the COPD Strategy document of the Health and Consumption Ministry, are worth emphasizing: between 750 and 1,000 million Euros a year⁵, including direct, indirect and intangible costs. Exacerbations also contribute significantly to these costs, as does the existence of comorbidities.

COPD is responsible for many of the visits to a pulmonologist, but also to other specialists. This is why ESTEVE’s *“Meetings for Innovation in Respiratory Therapy”* symposium was addressed to specialists in Pulmonology, Internal Medicine and Primary Care, as well as to all health professionals involved in the approach to patients with COPD.

References

- ¹ Lange P, Celli B, Agustí A., et al. [Lung-Function Trajectories Leading to Chronic Obstructive Pulmonary Disease](#). N Engl J Med. 2015 Jul 9;373(2):111-22. doi: 10.1056/NEJMoa1411532.
- ² Instituto Nacional de Estadística (INE) <http://www.ine.es/prensa/np896.pdf>
- ³ Sociedad Española de Neumología y Cirugía Torácica ([SEPAR](#))
- ⁴ *Global Initiative for Chronic Obstructive Lung Disease* ([GOLD](#))
- ⁵ [Estrategia en EPOC del Sistema Nacional de Salud](#)

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