

Chronic respiratory diseases as a risk factor for Herpes Zoster infection

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Abstract-

Introduction

Herpes zoster (HZ) is a condition that results from the reactivation of the varicella zoster virus (VZV). Several diseases have been reported to increase the risk of developing HZ and postherpetic neuralgia (PHN). The objective of this study is to analyze the prevalence and risk factors for HZ and PHN in the most frequent chronic respiratory diseases, which are chronic obstructive pulmonary disease (COPD), asthma, lung cancer and obstructive sleep apnea (OSA).

Methods

We conducted an observational, retrospective, non-interventional study between January 2012 and December 2020 based on data from the Castilla-La Mancha Regional Health System in Spain. We used the Savana Manager 3.0 artificial intelligence-enabled system to collect information from electronic medical records.

Results

31 765 subjects presented a diagnosis of HZ. Mean age was 64.5 years (95%CI 64.3–64.7), and 58.2% were women. The prevalence of HZ showed an increasing trend in patients over the age of 50. A risk analysis adjusted for sex and comorbidities in COPD, asthma, lung cancer and OSA presented a higher risk of developing HZ in the first three (OR 1.16 [95%CI 1.13–1.19], 1.67 [1.63–1.71], 1.68 [1.60–1.76], respectively), which further increased in all three when associated with comorbidities. Regarding postherpetic neuralgia, an increased risk was only observed related to COPD and lung cancer (OR 1.24 [95%CI 1.23–1.25], 1.14 [1.13–1.16], respectively), further increasing when associated with comorbidities.

Conclusions

In a standard clinical practice setting, the most prevalent respiratory diseases (asthma, COPD and lung cancer) are related to a higher risk of HZ and PHN. These data are fundamental to assess the potential impact of vaccination in this population.

Index Terms- Asthma; Chronic obstructive pulmonary disease; Herpes zoster;

Lung cancer; Postherpetic neuralgia; Obstructive sleep apnea; Artificial intelligence

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