



## CORRESPONDENCE

## Potential survival paradox in pneumonia



Dear editor,

I read with great interest the article entitled “Pneumonia mortality, comorbidities matter?” by Hespanhol V and Bárbara C.<sup>1</sup> Epidemiology of pneumonia varies among countries. Interestingly, pneumococcus accounted for 40% of bacterial isolates in Portugal. The result of this study may suggest the target of vaccinations and other prevention strategies. However, there are some concerns; some factors which can contribute to impaired outcomes were associated with better outcomes in this study.

Obesities, chronic obstructive pulmonary disease, asthma, and diabetes mellitus were associated with improved hospital mortality in this study. These diseases can develop at a relatively young age, and this result may reflect the potential confounding factors, especially the accessibility to physicians (obesity survival paradox).<sup>2</sup> The existence of past medical history may mean patients go to hospital at an early stage of pneumonia. Tobacco also seemed associated with improved outcomes. If this variable referred to the current smoking habit, it could mean the patients’ general condition was not bad.

Among the factors mentioned above, chronic obstructive disease and diabetes mellitus have been reported to result in impaired survival.<sup>3,4</sup> Due to the nature of the retrospective design, it may be complicated to investigate the patients’ habits in detail; however, we should be aware of these limitations when interpreting the result of this study. Further investigations are needed to confirm the risk factors for hospital death among patients with pneumonia in Portugal.

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## Conflicts of interest

The author declares no potential conflicts of interest.

## CRediT authorship contribution statement

H. Ito: Conceptualization, Writing - review & editing.

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