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Herpes zoster and dementia : more evidences for a causal link

In this issue of the Journal of Prevention of Alzheimer Disease, Lorenzo Blandi et al. reported an increased risk of developing dementia among people aged 50 and over and hospitalized with severe Herpes Zoster infection [1]. The analyses were made on a retrospective matched cohort study based on administrative health records from the Lombardy Region Datawarehouse. More than 12,000 subjects older than 50 years hospitalized for severe Herpes Zoster infection have been followed-up during twenty three years and compared with more than 60,000 controls from the general population and more than 60,000 controls from the hospitalized population. Subjects hospitalized for herpes zoster had an increased risk of dementia compared with the general population (+13 %) as well as with the hospitalized population (+8 %). These results shed light on the controversial relationship between exposure to varicella-zoster virus and risk of dementia. They were obtained on a large population-based cohort with appropriate statistical analysis to control the competitive risk of death, and an appropriate design to control a potential detection bias for dementia within one year of hospitalization for zoster. Although the increased risk of dementia was limited, this study reinforces the idea that reactivation of the varicella-zoster virus may be a new treatable risk factor of dementia. Recently, Markus Eytting et al. [2] reported in Nature an impressive study, with a quasi-randomization design showing that live-attenuated zoster vaccine reduced the probability of a new dementia diagnosis by 20 % over 7 years of follow-up. Moreover, this study demonstrated that this reduction was related either to a reduction in reactivations of the virus or to a virus-independent immunomodulatory effect. These results were recently corroborated in an Australian study with a similar design [3]. Taking together, these three studies encourage immunization against herpes zoster as a way of preventing dementia. Certainly, the precise mechanism of action of the vaccine is not elucidated, but the reduction of the risk of dementia is a so important goal that it justifies the promo-

tion of the herpes zoster vaccine, in addition to the beneficial effect on one of the most painful diseases for adult people.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

CRediT authorship contribution statement

Jean-François Dartigues: Conceptualization, Validation, Writing – original draft, Writing – review & editing. **Morgane Linard:** Validation, Writing – original draft, Writing – review & editing.

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