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Depression and anxiety in caregivers of patients with celiac disease

Dear Editor,

Ludvigsson et al. conducted a risk assessment to estimate hazard ratios (HRs) for depression and anxiety in caregivers of patients with celiac disease (CD) [1]. Using Cox regression analysis, they found HRs (95% confidence intervals (CIs)) for depression and anxiety in caregivers of patients with CD were 1.11 (1.03–1.19) and 1.07 (0.98–1.16), respectively. After combining anxiety and depression into a composite dependent variable, the HR (95% CI) became 1.08 (1.02–1.14). After reviewing the research, I have several concerns about the design of the study and their analysis of the findings.

First, the authors presented the HRs of caregivers for depression and anxiety after stratifying the subjects into groups based on their level of risk. In the high-risk group, the significance of the independent variables was not always observed, and the relationship between the caregivers of patients with CD and mental health problems is not clearly described. In addition, the caregivers were categorized as at high-risk simply based on self-report. Thus, the actual level of risk cannot be independently confirmed. Since the increased risk of depression and/or anxiety was relatively high at around 10% in their study, further research is needed.

Second, the authors conducted a population-based study. Therefore, the characteristics of the control (first-degree relatives of patients without CD) should have been more specified. Although I appreciate the adequate number of samples, there was no significant difference in the prevalence of the first diagnosis of anxiety between the subgroups of caregivers. Furthermore, since depression and anxiety are not always caused by the activity of caring for patients with CD, more comprehensive analyses are needed. To illustrate this point, the time trend analysis identified an important fact that the risk of depression and anxiety became highest just before and 4–8 years after the CD diagnosis.

Third, Lee et al. conducted a 6-month follow-up study to clarify the predictors of depressive disorders in caregivers of cancer patients [2]. They reported that older age, hypnotics use, pre-existing depressive disorders and poor mental health status at baseline were significant predictors of depressive disorders after 6-months. Although it is challenging to manage the mental health problems of caregivers, sleep problems in elderly caregivers and pre-existing poor mental health should be addressed in order to avoid caregiver depression and anxiety.

Similarly, Baglioni et al. conducted a meta-analysis to evaluate the effect of insomnia on subsequent depression [3]. The overall odds ratio (95% CI) for depression in people with insomnia (as determined by random-effects model) was 2.60 (1.98–3.42). In addition, Pigeon et al. conducted a systematic review to clarify the effect of insomnia on mental illness [4]. They recognized the insomnia-depression relationship and speculated that the treatment of insomnia could contribute to the prevention of mental illness. Taken together, the results of these studies indicate that depressive disorders in caregivers could at least partially be prevented by addressing the causes of insomnia.

Finally, many caregivers could not predict or prepare for their loved ones illness and they may have little chance to cope with the mental stress involved in care giving. An adequate healthcare system is required to avoid mental problems and sleep disturbance in caregivers [5].

Disclosure statement

No potential conflicts of interest were disclosed.

Conflicts of interest

None declared.

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Depression and anxiety in caregivers of patients with celiac disease. Author's reply

Dear Editor,

We thank Dr. Kawada for his letter concerning our article [1]. We would like to clarify that our stratification of subjects into a high-risk group was based upon the assumption that the caregiver relation was active around the time of celiac disease (CD) diagnosis, i.e. the high-risk stratum included parents to children with CD and spouses to individuals diagnosed in adulthood. In some of the subgroup analyses, results were not statistically significant; we believe this was due to insufficient power (the overall relative risk was 1.1 and large numbers are needed to detect minor excess risks). We agree that the time-trend analysis was informative as to where in the time-line of CD the mental pressures for the caregivers are most intense, and in what time-window the caregiver burden is potentially highest (with a subsequent need for actions preventing poor mental health). We also agree that our study cannot shed light on

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the existence of a correlation or effect modification by other factors such as hypnotics use or insomnia. In one of our earlier papers, medications for insomnia were more common in CD patients [2] and it is possible that also first-degree relatives are more prone to insomnia. However we find it unlikely that depressive disorders among CD caregivers could be partly prevented by exploring the cause of insomnia. Finally the period of care in CD is far more predictable than the corresponding period for cancer. In parents the period will be as long as the child stays at home and for spouses the period may be lifelong as CD is a chronic albeit rarely fatal disease [3]. How to optimally improve life satisfaction and prevent mental health problems in caregivers (except for increased awareness in adequate time windows) lies beyond the scope of our article but is of course an important question for future research.

Conflict of interest

None declared.

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