Reviewer’s report

Title: The clinical characteristics and therapeutic outcomes of cryptococcal meningitis in elderly patients: a hospital-based study

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Reviewer: Pasquale Pagliano

Reviewer’s report:

Tsai et al highlighted the findings of CM in patients aging >65 yrs. They find that chronic diseases such as diabetes, COPD and Adrenal insufficiency are more common in elderly patients with CM than in those aging <65 yrs. Only Cryptococcemia is associated to patients' mortality.

Although the description of CM in elderly can be a valuable contribute to the knowledge in the field of meningitis, the paper needs some improvement prior to be considered worth of publication.

Introduction section

As a general comment, the authors have to discuss the commonest forms of meningitis in elderly (i.e. Listeria and pneumococcal meningitis) suggesting how they can differentiate these forms from CM (see Listeria monocytogenes meningitis in the elderly: Distinctive characteristics of the clinical and laboratory presentation. J Infect. 2015 Jul;71(1):134-6. and Listeria monocytogenes meningitis in the elderly: epidemiological, clinical and therapeutic findings. Infez Med. 2016; 24:105-11). Are there reasons to suspect CM in particular areas?

Line 5 there is no need to add (C.) after Cryptococcus

Line 9 'population aging', not aging population

Methods

The sample is too small to perform an accurate multivariate analysis

Results

The authors have to report the percentage of patients with risk factors for immunocompromission in both groups (is immunosenescence a risk factor for CM?) and compare this finding between the groups. Are there differences related to treatment schedules?
It is not clear which population (I assume aging Vs not aging) is considered for multivariate analysis.

How the authors assess 'recent cerebral infarction? Elderly patients can have vascular lesions that are not attributable to CM

Discussion

The authors have to underline in this section which are the characteristics to be considered to suspect a so uncommon infection in the aging population

As reported in the results section, the relationship between vascular lesions and CM is intriguing, but it needs an accurate literature analysis in the aging population that was not performed in this section

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

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