

PEER-REVIEW REPORT

Name of journal: Artificial Intelligence in Medical Imaging

Manuscript NO: 55082

Title: Cerebral amyloid angiopathy vs. Alzheimer's dementia: A case report examining the value of imaging in the diagnosis of cognitive impairment

Reviewer's code: 04123310

Position: Editorial Board

Academic degree: PhD

Professional title: Associate Professor

Reviewer's Country/Territory: China

Author's Country/Territory: United Kingdom

Manuscript submission date: 2020-03-17

Reviewer chosen by: Jia-Ping Yan

Reviewer accepted review: 2020-06-02 08:05

Reviewer performed review: 2020-06-03 12:27

Review time: 1 Day and 4 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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SPECIFIC COMMENTS TO AUTHORS

This article presented a case report that an old patient had AD-related impairment in verbal fluency and memory, and CAA-related features in MRI brain, which would result in the potential for misdiagnosis. The author suggested the requirement of multimodal neuroimaging including PET, and the usage of artificial intelligence (AI) methods in reviewing imaging for the final clinical diagnostic. This is an interesting case, and the article is well written. However, there are some issues and problems needed to be addressed. 1. Generally, a case report should present an unusual sample which may show novel in the literature. However, there was no description about it, and the authors are suggested to explain firstly the relationship between CAA and AD, and then address the question why this case is typical and will bring new in this field. 2. The case report presented scores of several scales, but some of readers may not know what the meaning of scales and scores represent. Thus, the authors should provide more information about the introduction of scales and the potential symptoms of high and low score. 3. The author suggested that AI would help to review imaging in the clinical diagnostic, but it is unknown why and how it can be used in this situation like individual diagnostic. The authors should provide more information about the concrete AI methods and suggestions about how these methods use.

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Name of journal: Artificial Intelligence in Medical Imaging

Manuscript NO: 55082

Title: Cerebral amyloid angiopathy vs. Alzheimer's dementia: A case report examining the value of imaging in the diagnosis of cognitive impairment

Reviewer's code: 04279936

Position: Associate Editor

Academic degree: PhD

Professional title: Academic Research, Professor

Reviewer's Country/Territory: France

Author's Country/Territory: United Kingdom

Manuscript submission date: 2020-03-17

Reviewer chosen by: Jia-Ping Yan

Reviewer accepted review: 2020-06-02 09:47

Reviewer performed review: 2020-06-10 02:19

Review time: 7 Days and 16 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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SPECIFIC COMMENTS TO AUTHORS

On the form, this paper respects the approach and the indications required by the editor for the Case Report category. On the content, the paper deals with a case linked to cognitive disorders. The authors discuss that diagnosing a dementia subtype from a certain angle can be complex and often requires a comprehensive cognitive assessment and dedicated neuroimaging. they suspect that the initial imagery may have misled the diagnosis due to such cognitive biases and suggest that the application of artificial intelligence can overcome such cognitive biases. The document is well written and structured and Contains the necessary references. As a reviewer, I give a favorable opinion and I recommend its publication.