Anosmia and ageusia in COVID-19 patients: Objective testing and Magnetic Resonance Imaging in five cases

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Abstract

Background: Anosmia and ageusia are acknowledged as pathognomonic symptoms for SARS-CoV-2 infection by now. Smell-and taste disorders were significantly more frequent in COVID- 19 patients than in influenza patients. Disease characteristics show an acute onset and an initial manifestation of anosmia and ageusia. These symptoms have been linked to a neuroinvasive course of disease. Methods: In this study we investigated five consecutive COVID-19 patients with a prolonged course of anosmia and ageusia by conducting a Burghart Screening 12 Test with taste stripes in the late stage of the disease. Those with objectifiable alteration in taste or smell were subjected to MRI with contrast agent to investigate possible involvement of the central nervous system. Results: We found anosmia and ageusia to be mostly objectifiable, but no evidence for neuroinvasiveness could be detected by MRI in the late stage of the disease. Conclusions: Alterations in taste and smell could be objectified in most patients. Nevertheless, no evidence for a neuroinvasive potential could be identified by MRI, at least in the late stage of disease. We encourage medical professionals to conduct specialised examinations and MRIs in the acute stage of disease, which guarantees an optimum patient care.

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