

# Ageusia, a highly specific symptom of COVID-19, for which an unaware patient may seek dental assistance

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The rapid worldwide spread of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has profoundly changed dental practice with the initial suspension of all clinical activities except emergent situations. In Europe, many countries are moving toward the so-called 'phase 2', coexistence with the virus. Of course, the resumption of activities will cause a rise in the contagion curve. To slow this rise in cases, it will be essential to be able to identify suspicious cases and to ensure that such patients undergo a nasopharyngeal swab. A knowledge of the most frequent symptoms in the early stages of coronavirus disease 2019 (COVID-19) is mandatory to achieve this goal and dentists, through the anamnestic information collected during the triage procedures, will have a fundamental role in this process.

Taste and smell disturbances were reported as rare findings in these patients, in the Chinese case series, affecting only 5% of patients<sup>1</sup>. At the end of March, we first realised that in Italian COVID-19 patients the incidence of these conditions was much higher, and, in particular, these symptoms were very frequent in the early stages of the disease<sup>2,3</sup>. Subsequently, similar findings have been reported by several authors in Europe and America<sup>4-6</sup>, with incidences of around 70% of these patients. Chemosensitive disorders represent early symptoms of COVID-19, commonly occurring within 2-3 days after the clinical onset<sup>7-9</sup>. The latest data reported by Petrocelli *et al.*<sup>4</sup>, evaluating the gustatory function in 300 patients in the first 4 days from the clinical onset, detected a taste dysfunction in 60.4% of the cases. Interestingly, in a large multicentre Italian study recently published by our group, chemosensitive symptoms proved to be the first symptom of COVID-19 in 29.2% of patients and the only one in 9.5% of cases<sup>9</sup>. In most patients, the recovery of gustatory function generally occurs within 3 weeks.

However, in 7.2% of cases, severe ageusia or hypogeusia can persist for more than 60 days<sup>10</sup>.

The pathogenesis of these disorders is probably related to the infection of the support cells to the olfactory and gustatory receptors, rich in angiotensin converting enzyme 2 (ACE2) receptors<sup>11</sup>. In fact, ageusia is a well-known side effect of ACE2-inhibitors.

Ageusia is a rare condition that is characterised by a complete loss of taste function of the tongue. This condition is one of the typical symptoms of COVID-19 has important implications in dental practice. At the beginning of the epidemic in Italy, an abnormal number of patients attended our dental, neurological and surgical clinics on account of the detection of sudden onset ageusia, not associated with any other symptoms. Subsequently, SARS-CoV-2 infection was soon diagnosed in these patients following the further onset of fever and cough. This strange coincidence was the reason that prompted us to start investigating the role of chemosensitive disorders in COVID-19.

Based on the growing number of reports that place these COVID-19 symptoms as the second most frequent after fever, several countries are including chemosensitive disorders in their guidelines for the diagnosis of SARS-CoV-2 infection.

Dentists should be warned that in respect of patients seeking assistance for the sudden onset of ageusia, a suspicion of ongoing coronavirus infection should be considered in a differential diagnosis. In the same way, chemosensitive disorders should be investigated in the anamnestic data collection during pre-triage procedures. If present or recently experienced, the patient should be referred to a COVID-19 hospital for a nasal swab for identification of the virus.

Based on the frequency of these symptoms, which can often be the reason why the patient attends for a

dental appointment, we think it is essential that they are included in the dental association national guidelines that will be issued for the resumption of clinical activity during the post-epidemic era.

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## CONFLICT OF INTERESTS

None declared.

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