Anosmia as a potential marker of COVID-19 infection – an update

It is nearly two weeks since ENT UK and the BRS issued a press-release, alerting physicians to the risk that patients presenting with isolated anosmia may be suffering with COVID-19 infection, and that full PPE should be employed if seeing such patients in clinic. We advised that patients with new-onset anosmia should be advised to self-isolate in order to reduce the risk of transmission by otherwise asymptomatic carriers of infection.

Since then, much has changed; we have been placed under near ‘lock-down’ and all face-to-face consultations have ceased, with the exception of time-critical referrals. Our statement however, free of such restrictions, has travelled the world and generated much social media interest. Celebrities have come out to announce their recent loss of sense of smell, from basketball players to MPs, shining a light on anosmia, which has until now been a much-neglected condition. There has been wide dissemination of our letter in the international press, mostly written with the shared aim of reducing the risk of transmission. Some articles have questioned the validity of the background information included in the letter, and the rationale in making a statement before the publication of peer-reviewed evidence. We felt it an appropriate time to review our statement and update you with the latest evidence.

At the time of writing, one study had been reported in the German press, stating that more than 2 in 3 of 200 confirmed COVID-positive patients interviewed in hospital reported loss of smell and taste. The report in the Korean press was mistranslated, and the 30% rate of anosmia came from a quote from a doctor in Deagu, rather than from a formal study. Subsequently, the same newspaper reported on an updated study from Deagu, running through to March 25, of 3,191 COVID-19-positive patients who were self-isolating at home with mild disease, of whom 15.3% expressed smell or taste loss. An Iranian series of 10,069 participants with onset of anosmia within the time course of the pandemic, found the number of cases in each geographical province correlated with the number of confirmed COVID-19 cases. None of these studies has been peer-reviewed. There is much additional anecdotal evidence being shared amongst physicians on digital platforms such as the American Rhinological Society DocMatter forum. However, rapid systematic scoping review concluded that evidence around changes in loss of smell and taste being a clinical feature of COVID-19 infection were highly preliminary.
Since the statement was released, a large number of patients have contacted us directly to share their experiences. This has been mirrored on social media, where patients with both confirmed or suspected COVID-19 infection have widely reported suffering with anosmia. There is a risk that the media attention is leading patients with post-viral anosmia caused by unrelated viral infections, known to peak in February and March, to wrongly attribute their anosmia to the COVID-19 pandemic. The perceived increase in incidence may simply reflect previous under-reporting of short-lived episodes of post-viral anosmia. We acknowledge that COVID-19 is not the only possible cause of recent onset anosmia, although we think it is the most likely at the current time. We do now have further evidence to support a causal association between the apparent increase in reported anosmia and COVID-19 infection, but further confirmatory research is still required. There are many papers under review, but we can currently share the following details:

A series of 59 patients, hospitalised in Milan with confirmed COVID-19 infection, found that 1 in 3 reported smell or taste disturbance (accepted preprint). We are aware of other studies going through the peer review process showing higher rates of up to 2 in 3 patients in those with milder disease treated in the community.

There has been a surge in membership to anosmia support groups and internet searches for loss of sense of smell that predates the ENT UK/BRS statement and surrounding publicity, mirroring the timing of the outbreak of COVID-19 in different countries (papers in print).

Patients making contact with the authors following the release of the statement were questioned regarding the presence of other symptoms. Of more than 2,000 patients completing an anonymous online survey, 1 in 6 report isolated anosmia. 51% had either a cough or a fever but a wide range of symptoms reported in patients with COVID-19 infection included fatigue, myalgia and gastrointestinal disturbance. Only 5% had been tested, but in this group 74% were positive for COVID-19 (under review).

Subsequent to our press-release, the American Academy of Otolaryngology-Head and Neck Surgery has also called for anosmia to be added to a list of symptoms used to screen for infection. We have been in contact with Public Health England with regards to discuss the utility of anosmia as a marker of infection; however, anosmia is not yet included in the list of associated symptoms used by the NHS 111 service or recognised by the World Health Organisation.

We have been contacted by researchers and scientists from around the world who have been generous in sharing information. We are also delighted to be collaborating with a global initiative to test if onset of anosmia may be used to identify outbreaks at an early stage. Please visit sniffoutcovid.org if you would like to get involved.

We were delighted that the team at King’s College, London added loss of sense of smell to the COVID-19 symptom tracker on 24 March 2020. In a research update published today, 1 April, they reported that loss of sense of smell or taste is a stronger predictor of coronavirus infection than fever. Of patients who had tested positive for COVID-19, 59% reported losing their sense of smell or taste, compared with only 18% testing negative. They support the suggestion that anosmia may be an early warning sign of infection, and the lead researcher,
Prof Tim Spector stated "When combined with other symptoms, people with loss of smell and taste appear to be three times more likely to have contracted COVID-19 according to our data, and should therefore self-isolate for seven days to reduce the spread of the disease."

We remain confident in our earlier assertion that, during the current COVID-19 pandemic, a patient presenting with new-onset anosmia, in the absence of a head injury or nasal obstruction, should be considered likely to have COVID-19 infection. Patients should be advised to self-isolate and considered for confirmatory testing if available. PPE should be used by healthcare workers if medical contact is required.

Yours sincerely,

Prof Claire Hopkins, BMBCh, MA, FRCS(ORLHNS), DM(Oxon) President of the British Rhinological Society
Professor of Rhinology, King’s College London
Consultant ENT Surgeon, Guy’s and St Thomas’ Hospitals

Prof B Nirmal Kumar, MPhil, FRCS (ORL-HNS), DLO, FAcadMEd
President of ENT UK
Consultant ENT Surgeon & Director of Medical Education, WWL NHS FT
Honorary Professor, Edge Hill University Medical School

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