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Acute anosmia from COVID-19 infection

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I am a 27-year-old neurology registrar working on the wards in a teaching hospital, Pedro Ernesto University Hospital. As a public health reference centre in Rio, we had prepared to receive coronavirus-infected patients, and I worried that sooner rather than later, I would contract the infection myself. I began to feel ill on Sunday, 21 March, just 1 week after the quarantine measures had started, despite using appropriate protective equipment. I had mild common influenza-like symptoms, including headache, cough, sore throat, runny nose, sneezing and moderate myalgia; I felt unwell but remained afebrile throughout. I was tested for the novel coronavirus on the third day. On the fourth and fifth days, I felt short of breath while doing household chores. I monitored my oxygen saturation at home, which remained at 99% at all times without oxygen supplementation. I auscultated my lungs and found no abnormalities.

After 6 days of symptoms, I awoke on a Saturday and all seemed to be fine. I felt perfectly well and healthy—no shortness of breath, no headache, and no myalgia. As always, I prepared my morning cup of coffee. I opened a new bag of freshly ground Brazilian coffee powder that I had been saving for when I felt better, and from habit took a deep sniff. I could smell absolutely nothing! That amazing smell of freshly roasted coffee had gone entirely. I tried to recall the last time I had smelled anything. Before bed, the night before, the taste and smell of a cup of tea had been completely normal. I searched for new objects and foods to smell—perfume, spices, bread, chocolate and even a lighted match. Nothing! I tried smelling rubbing alcohol, resulting only in sneezing (at least my trigeminal nerve was okay!). So I made the coffee and tested whether its taste was as severely compromised as the smell. I could still taste it,

although a bit less than the day before. I had been sceptical that those mild influenza-like symptoms really had been from the coronavirus, but with the sudden and complete anosmia, I now believed otherwise.

The PCR (polymerase chain reaction) test result came after 7 days, and it was positive. I did have the new coronavirus! The possibility that my olfactory epithelium and pathways might never recover fully from the **post-viral** insult was initially troubling. Would I forever have no sense of smell? Days passed, and every morning I followed the same routine: do-it-yourself olfactory testing. I would wake up and smell the same seven items: coffee, my deodorant, toothpaste, nutmeg, perfume, oregano and a banana. After the fifth day of nothing, I started to identify a very distant perfume smell, actually, a 'sweet', non-specific smell. But that was it. And so I continued, self-testing day after day while in self-quarantine. And each day, the odours became more apparent and distinguishable. I could soon distinguish a distant perfume smell from the nutmeg and the deodorant. After 7 days, I could finally smell my delicious coffee again, although not as well, and could distinctly tell apart every single item on my list. What a relief! On that same day, my taste improved as well. Now on the 13th day since disease onset, both smell and taste continue to improve.

As neurologists, we often neglect clinical testing of the olfactory nerve, valuing it only in neurodegenerative diseases and in a few other situations.¹ But the coronavirus pandemic has shed a new light on this much forgotten cranial nerve. The prevalence of olfactory disturbances in COVID-19 infections may be as high as 60% in some countries.² Having been a victim of sudden total anosmia, I have since rethought my own neglectful behaviours. Living alone in quarantine and



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being unable to tell if food is spoiled, if something is on fire or just being unable to enjoy my morning coffee, I had felt completely disoriented. Thankfully, the effects for me were not longlasting. But they had lasted enough to make me reconsider the way I think about disturbances of smell in neurology.

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