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In the case of patients who cannot access these digital technologies or face-to-face assessment in health centres, TB units could be set up to ensure all the necessary health measures to increase confidence among the population and reduce the risk of resistant forms of TB. These among other measures would be able to boost early diagnosis, access to medications and control of adherence to treatment, while avoiding the spread of COVID-19.

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Conflicts of interest

The authors have no conflicts of interest to declare.

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Ramsay Hunt syndrome following mRNA SARS-COV-2 vaccine[☆]



Síndrome de Ramsay Hunt tras vacunación con m-RNA SARS-COV-2

Dear Editor,

Ramsay-Hunt syndrome typically manifests with a vesicular rash on the concha and external auditory canal associated with peripheral facial paralysis. This is caused by reactivation of latent varicella-zoster virus within the geniculate ganglion, in association with factors that influence immunosuppression, including immunosenescence.

We recently assessed a female patient at our centre who exhibited symptoms consistent with Ramsay-Hunt syndrome following administration of the COVID-19 vaccine. At the time of writing, we are not aware of any other published cases of a similar nature, just herpes zoster reactivation in other locations^{1–3} and Bell's palsy^{4,5}, which is why we wanted to warn of this possibility. Our patient is a 78-year-old woman with a history of childhood poliomyelitis with sequelae in the lower limbs, as well as untreated arterial hypertension. Three days after receiving the BNT162b2 vac-

cine (Pfizer-BioNTech), she began to experience instability, general malaise, nausea and severe pain in the external auditory canal and right half of the cranium. She attended A&E where she underwent a range of tests, including blood tests, a PCR test for SARS-CoV-2 and a brain CT scan. She was initially diagnosed with flu-like symptoms in the context of vaccination. However, she returned to A&E two days later due to a worsening of her symptoms and decreased right-sided facial motility. Examination revealed vesicles and crusted lesions on the concha of the right ear and House-Brackmann grade IV right peripheral facial paralysis, a left horizontal-rotatory nystagmus and gait instability falling to the right side. Audiometry revealed bilateral sensorineural hearing loss that was more pronounced in the right ear (the findings in the left ear were consistent with presbycusis). Video Head Impulse Test (V-HIT) identified vestibular hypofunction of the right ear (gain of 0.43). Two weeks later, the patient's instability and sensorineural hearing loss, particularly in the right ear, persisted, accompanied by a very slight improvement in facial paralysis.

Varicella-zoster virus reactivation and idiopathic facial paralysis have often been reported in association with several virus vaccinations, including influenza and hepatitis B. It is therefore not particularly surprising that cases of both conditions in relation to SARS-CoV-2 vaccination have recently been published, as mentioned above. Evidence of peripheral facial paralysis has even emerged from a phase III clinical trial with COVID-19 vaccines⁴. That article reported that 844 (0.6%) of the 133,883 cases of adverse reactions to mRNA COVID-19 vaccines received by the World Health Organization pharmacovigilance database by the beginning of March (considering that more than 320 million people had been

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vaccinated) were facial paralysis events (749 cases were with the Pfizer-BioNTech vaccine and 95 with the Moderna vaccine). Moreover, it is important to note that 0.5% of the 1,265,182 cases reported as adverse drug reactions with other virus vaccines, and 0.7% of the 314,980 cases reported with flu vaccines, were facial paralysis events^{6,7}. Pharmaco-epidemiological studies have been unable to demonstrate a greater risk of facial paralysis following administration of these vaccines, and the data after mRNA COVID-19 vaccine administration seems to be consistent with this.

We are not aware of any other reported cases of Ramsay-Hunt syndrome following COVID-19 vaccination or any other virus vaccination in the recent literature. This is probably because herpes zoster oticus accounts for less than 1% of all cases of herpes zoster and 12% of peripheral facial paralysis cases⁸, whose possible associations with vaccines are already rare. Nevertheless, it should not be forgotten that herpes zoster oticus can affect both immunocompetent as well as immunocompromised patients, even though it is much more likely in the latter group and in the elderly, as was the case with our patient. Ultimately, vaccinations with live or attenuated viruses entail immunomodulation that includes suppression of cell-mediated immunity.

To conclude this letter, we would like to emphasise the importance of vaccination to put an end to the pandemic. The possible onset of these conditions is rare and the risk is very low. However, they should still be taken into account and properly reported in order to optimise the registration of this large-scale trial that is global vaccination.

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Ramsay Hunt syndrome and mRNA SARS-COV-2 vaccination



Síndrome de Ramsay Hunt y vacunación de ARNm contra el SARS-COV-2

Dear Editor:

We would like to share ideas on “Ramsay Hunt syndrome following mRNA SARS-COV-2 vaccine.”¹ Rodríguez-Martín et al. noted that “The onset of ocular symptoms starting within one week following vaccination suggests an inflammatory or autoimmune ... Ophthalmologists should consider the option of autoimmune ... as uveitis, following COVID-19 vaccination.”¹ In general, adverse reaction to new COVID-19 is sporadically reported. The facial palsy is also possible. For Ramsay Hunt syndrome, there are many possible causes. In the present case, BNT162b2 vaccine is used. For mRNA COVID-19 vaccine, the important consideration is on induction of autoimmunity. Association between autoimmunity and Ramsay Hunt syndrome is reported.² Nevertheless, if the autoimmunity is the cause of post COVID-19 vaccination Ramsay Hunt syndrome, an abnormal autoimmunity should be detected. The other possible cause of facial palsy after COVID-19 vaccination is the vaccine induced hyperviscosity. After receiving COVID-19 vaccine, a recipient might develop excessive immune response and result in excessive blood viscosity.³ Hyperviscosity is reported as cause of facial palsy in the literature and might be another cause of reported syndrome in the case report.⁴

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