

A case of trigeminal neuralgia that occurred after COVID-19 vaccination

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(*Cent Eur J Immunol* 2024; 49 (2): 92-93)

To the Editor,

We read with great interest the case report titled "Trigeminal neuralgia occurring after the third dose of Pfizer BioNTech COVID-19 vaccine. Complication or coincidence? An illustrative case report and literature review" authored by Mr. Chrostowski, published in the 48th Volume, 1st issue of your journal dated Feb 27, 2023 [1]. We would like to express our gratitude for this rare case report.

COVID-19 disease is caused by a viral infection that progresses with various neurological involvement and causes serious morbidity and mortality [2]. Vaccines have been developed for protection against the disease, and they are highly effective and safe. However, neurological complications linked to the vaccines have been identified [3]. Very few patients with trigeminal neuralgia/neuritis complications due to SARS-CoV-2 vaccination have been reported [1, 4, 5]. We would like to contribute with this presentation of a case of trigeminal neuralgia following SARS-CoV-2 vaccination.

A 44-year-old woman presented with complaints of jaw pain and spasm for about three months. The patient stated that her complaints began clearly after the second dose of Pfizer-BioNTech vaccination against SARS-CoV-2. At the time of the patient's complaints, the vaccination regime in our country was 2 doses of Pfizer-BioNTech vaccine administered 3 months apart. After the vaccines were administered, no reaction or pain at the vaccination site was described. The patient underwent a COVID-19 PCR test twice before vaccination and the results were negative. The COVID-19 PCR test performed after the symptoms developed was also negative. The patient did not have any known additional disease. The patient had received tuberculosis (BCG), hepatitis B, diphtheria, tetanus, whooping cough, varicella, measles, rubella and mumps vaccines, which are compulsory childhood vaccines in our country. She did not show any signs of adverse reactions after childhood immunizations.

She reported at first spasm in the lower chin region on the right side at three days and after then a pain began at the same area at one week after vaccination. The pain was

severe, 9 points on the visual analog scale and with sharp character. The pain was hindering her daily life activities and oral functions. Also, the pain increased significantly with the wind, brushing teeth or touching the face. She reported dry mouth and decreased salivation accompanying the pain. The patient consulted a dentist, thinking that tooth decay was the cause of the complaints she experienced. As a result of the examination, decayed teeth were detected. Fillings were applied to 2 teeth and 1 tooth was extracted. Since the patient's complaints continued, extraction was also performed for other teeth during subsequent examinations (1 molar tooth, 2 side incisors). But her symptoms did not change in spite of pulling the teeth.

She presented to our clinic with complaints of right face pain as described above and fatigue. The physical examination of the patient was completely normal and no abnormal findings were detected. There was no strength loss or facial asymmetry in the facial muscles, only the above-described allodynia with a light touch in the nasolabial region on the right side. Also there was no loss of general muscle strength or neurologic deficiency in the physical examination. Laboratory investigations, biochemical parameters including sedimentation rate, C-reactive protein and vitamin B₁₂ levels, hemogram and thrombotic panel results including D-dimer were normal. The only PCR test of SARS-CoV-2 that was applied to the patient had a negative result. The diagnosis of trigeminal neuralgia was confirmed after neurological consultations and further investigations. (Brain magnetic resonance imaging (MRI) did not reveal any significant pathology that could have contributed to the development of the symptoms.) Other causes of TN were excluded. Therefore, a diagnosis of TN due to vaccination was established. Oral carbamazepine 200 mg twice daily was initiated by a neurologist. After the carbamazepine treatment her symptoms generally decreased by about 70% and severity of the worst pain was about 6.3 points on the visual analog scale.

Trigeminal neuralgia is one of the neurological conditions that develop after COVID-19 development and

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Submitted: 04.04.2024, Accepted: 21.05.2024

its manifestation mechanism is not fully understood [5]. Neurological complications and side effects of safe, effective and widely used vaccines for SARS-CoV-2 infection should be considered. In conclusion, trigeminal neuralgia should be considered as one of the important neurological complications of COVID-19 vaccination.

The patient was informed about the publication of the case report and written consent was obtained.

Funding

This paper received no external funding.

Disclosures

Approval of the Bioethics Committee was not required. The authors declare no conflict of interest.

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