

Tozinameran

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Aseptic meningitis, mucocutaneous lesions and arthritis: case report

A 15-year-old boy developed aseptic meningitis, mucocutaneous lesions and arthritis following COVID-19 vaccination with tozinameran [routes and dosages not stated].

The boy, after receiving his 2nd dose of COVID-19 vaccination with tozinameran [Comirnaty] in October 2021, presented to the hospital with acute headache since 3 days followed by fever, nausea, vomiting and oral aphthous ulcers since 1 day. He received treatment with ibuprofen, however, no improvement was seen in his symptoms (lack of efficacy). His medical history was significant for a knee cartilage surgery (a month ago) and a few tick bites. In addition, his vaccinations including chickenpox vaccination were also completed. On admission, positive kernig and brudzinski signs, neck rigidity together with nausea and fever were suggestive of meningitis. Physical examination revealed aphthous ulcers on his lips, inner cheeks and tongue. Blood count showed mild leukocytosis with predominant neutrophils, elevated CRP and normal pralcalcinonin level. CSF analysis showed pleocytosis, consisting of both lymphomononuclear cells and granulocytes. Additionally, liquor lactate and glucose were normal, however, protein concentration and CSF/serum indices were significantly increased. Broad microbiological and virological screening did not identify any causative pathogen. Likewise, serological analyses did not show evidence for acute infections including varicella-zoster virus, herpes simplex virus, cytomegalovirus, epstein-Barr virus and B. burgdorferi. His PCR and serological tests for COVID-19 were negative.

The boy received treatment with cefotaxime. Three days after initiation of cefotaxime, a next-generation sequencing-based pathogen detection kit did not identify any causative agent. Three days following admission, he had also developed a slight maculopapular exanthema on his cheeks, erythema nodosum-like lesions and a single pustular lesion on his lower legs as well as swelling of his right knee. An ultrasound scan revealed echo-free joint effusion, and he further complained of vitreous floaters. No signs of uveitis or other intraocular abnormalities were seen, however, an optic coherence tomography showed inhomogeneities in the posterior vitreous. Apart from slight pachy- and leptomenigeal enhancement, his cranial MRI showed normal intracranial morphology. Furthermore, autoimmune serological analyses showed negative results. Based on the findings, aseptic meningitis, mucocutaneous lesions and arthritis resembling a Behcet's disease episode was considered secondary to tozinameran. Post admission (from day 3-day 5), his fever and headache followed by mucocutaneous, joint and visual complaints significantly decreased. His treatment with cefotaxime was terminated whereas aciclovir was given only for only 2 days. He completely recovered within 3 weeks after admission and remained asymptomatic for the following 2 months.

Bogs T, et al. Aseptic Meningitis, Mucocutaneous Lesions and Arthritis after COVID-19 Vaccination in a 15-Year-Old Boy. Vaccines 10: No. 2, Feb 2022. Available from:
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