Tozinameran

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Vasculitis: case report

A 48-year-old woman developed vasculitis following vaccination with tozinameran for prevention of COVID-19 [*route and dosage not stated*].

The woman received first dose of the tozinameran [BNT162b2 mRNA COVID-19 vaccine; Pfizer/BioNTech]. She did not have significant medical history. After 2 days from vaccination, she developed worsening consciousness and anisocoria. She noticed a gradually progressing left hemiparesis, and she presented to the hospital. Her systolic blood pressure was 119. Subsequent head computed tomography (CT) revealed intracerebral haemorrhage (ICH) of up to 5.6cm and oedema surrounding it in the right temporal lobe. A CT angiography showed no abnormal vascular lesions. Her laboratory examinations including complete blood count, coagulation tests of prothrombin time (PT) and activated partial thromboplastin time (APTT) and serum levels of antineutrophil cytoplasmic antibodies (ANCA) and c-reactive protein (CRP) were normal. Her PCR test for SARS-CoV-2 was negative.

The woman underwent a right frontotemporal craniotomy to evacuate the ICH. The clot was removed successfully. Pathological examinations of the hematoma wall and cerebral tissue showed neutrophilic infiltrates in small vessels with disruption of vascular architecture, few cell debris, erythrocyte leakage, and endothelial nuclear enlargement. Immunohistochemistry did not show amyloid deposition in the vessel walls, granuloma or fibrinoid necrosis in the vessels and necrosis and suppurative inflammatory findings. However, immunostaining showed thin collagen fibers and endothelial cells, with no elastic fibers or smooth muscle in the affected blood vessel walls, suggesting neutrophilic vasculitis at the level of capillary to postcapillary venules. Postoperative blood examinations were normal. Enhanced MRI revealed no abnormal lesions except for the hematoma. After ruled out other differential diagnoses, she was diagnosed with tozinameran-induced vasculitis led to ICH. She was discharged 4 weeks after onset.

Takeyama R, et al. Intracerebral hemorrhage due to vasculitis following COVID-19 vaccination: a case report. Acta Neurochirurgica 164: 543-547, No. 2, Feb 2022. Available from: URL: lhttp://www.springer.com/medicine/surgery/journal/701

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