

## AZD-1222

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**Cerebral venous sinus thrombosis and thrombosis with thrombocytopenia syndrome: case report**

A 44-year-old woman developed cerebral venous sinus thrombosis (CVST) and thrombosis with thrombocytopenia syndrome (TTS) following vaccination therapy with AZD-1222 for COVID-19.

The woman received first dose of AZD-1222 [Covishield; *dosage and route not stated*]. After four days, she developed a thunderclap headache. Therefore, she was admitted to a hospital. She showed minor neck stiffness and papilloedema bilaterally on examination, with no apparent specific impairments. High parietal sulcal hyperintensities were seen on an MR brain scan with fluid attenuated inversion recovery sequences, suggesting a sulcal subarachnoid haemorrhage. In the medullary veins, MR gradient echo sequences revealed haemorrhagic infarcts and venous congestion. An MR venogram revealed thrombosis in the right transverse sinus and inadequate flow in the posterior region of the superior sagittal sinus. Laboratory tests showed thrombocytopenia 80000 / $\mu$ L and elevated D-dimer >20000 ng/mL. While local particle gel and chemoluminescent immunoassays failed to identify anti-PF4 antibodies, the ELISA test suggested by international guidelines was positive. The differential diagnosis of TTS, thrombotic thrombocytopenic purpura (TTP), microangiopathic haemolytic anaemia (MAHA) and other prothrombotic conditions was made.

The woman was therefore treated with low molecular weight heparins for 1 day. She was transferred to another hospital, where probable diagnosis of TTS was made. Low molecular weight heparins was discontinued and she was initiated on mannitol, levetiracetam and fondaparinux sodium. Subsequently, her headache worsened and she developed new purpuric spots on her right forearm. Her platelet counts dropped to 45000 / $\mu$ L and her headache worsened. Therefore, she was initiated on immune globulin and fondaparinux sodium was continued. Over the next 4 days, her platelet counts improved to 200000 / $\mu$ L and symptomatic improvement was noted. It was concluded that, she developed CVST and TTS related to AZD-1222. Dabigatran was initiated and subsequently she was discharged. She was recovered fully and remained asymptomatic on 6 week follow-up.

Maramattom BV, et al. Cerebral venous sinus thrombosis after ChAdOx1 vaccination: the first case of definite thrombosis with thrombocytopenia syndrome from India. *BMJ Case Reports* 14: No. 10, 27 Oct 2021. Available from: URL: <http://doi.org/10.1136/bcr-2021-246455> 803612305