

**Dexamethasone/enoxaparin-sodium/methylprednisolone****S****Occipital lobe haemorrhages and off-label use: case report**

A 74-year-old woman developed occipital lobe haemorrhages during antithrombotic treatment with enoxaparin-sodium for atrial fibrillation. Additionally, she received off-label treatment with dexamethasone and methylprednisolone for COVID-19 [*route and duration of treatment to reaction onset not stated*].

The woman admitted to the emergency department for dyspnoea, cough and fever and was diagnosed with COVID-19 and multifocal pneumonia. She had a relevant medical history of hypothyroidism, dyslipidemia and atrial fibrillation been treated with Vitamin-K antagonist (VKA). She received treatment with off-label methylprednisolone 60mg daily for COVID-19; and ceftriaxone and clarithromycin. Also, her VKA was replaced by enoxaparin-sodium [enoxaparin] 6000UI twice a day. On day 5 of hospitalisation, she developed acute onset of confusion, disorientation and cortical blindness. Her blood pressure was 170/100mm Hg and brain CT scan demonstrated bilateral vasogenic oedema and intraparenchymal haemorrhages in the occipital lobes. No arterial and venous vessels malformations was noted in CT angiography. Blood analyses revealed leukocytosis, thrombocytosis and altered C-reactive protein and coagulation profile. Her symptoms and laboratory findings were consistent with posterior reversible encephalopathy syndrome and enoxaparin-sodium contributed to haemorrhage transformation.

The woman then received anticoagulation reversal therapy with phytomenadione and enoxaparin was discontinued along with implementation of strict blood pressure control. Also, her methylprednisolone was changed to off-label dexamethasone 8mg twice per day along with antiepileptic prophylaxis with levetiracetam. Few hours later, she developed sudden deterioration of the state of consciousness and a brain CT scan revealed an increased haematoma volume in the right occipital lobe with slight compression of the ipsilateral ventricle. Mannitol was added to the therapy. Thereafter, her clinical condition improved, with the complete recovery of the state of consciousness; however, left-sided lateral hemianopia with color blindness persisted. Subsequent brain CT scans showed the physiological evolution of the haematomas. Mannitol and levetiracetam were progressively reduced and then discontinued. Her blood pressure stabilised following optimization of unspecified antihypertensive therapy and her general condition improved. She was transferred to a rehabilitation facility following two consecutive nasopharyngeal swabs tested negative for SARS-CoV-2.

Motolese F, et al. Posterior Reversible Encephalopathy Syndrome and brain haemorrhage as COVID-19 complication: a review of the available literature. *Journal of Neurology* 268: 4407-4414, No. 12, Dec 2021. Available from: URL: <https://link.springer.com/journal/415>

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