

Letters to the Editor

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Vertebral Artery Occlusion After Chemotherapy

To the Editor:

We have read the interesting report by Periard et al about cisplatin-induced strokes.¹ The role of tumors as risk factors for vascular disorders has long been established. However, there is little evidence regarding the effects of chemotherapy. Several reports describe vascular toxicity in young patients treated with cisplatin, and these studies suggest a casual link.^{2,3}

We present a patient who experienced a stroke due to vertebral artery occlusion after chemotherapy.

A 48-year-old female patient was admitted to our hospital with nausea, vomiting, and headache. The patient also complained of tingling in the left side of her face. She had previous history of ovarian thecoma that was treated surgically on 3 occasions because of relapse and was finally treated with chemotherapy. The first dose of cisplatin, etoposide, and bleomycin was given 4 days before admission.

On admission she presented with Horner syndrome, facial asymmetry, impaired elevation of the left soft palate and dysphonia. She also had dismetria in left arm. Her gait deviated to the left side.

Blood tests were unremarkable, except for low leukocyte levels, with low neutrophile level, which was related to the side effects of chemotherapy, as levels returned to normal in posterior tests without specific treatment. The MRI showed brain damage in the left occipital region, left cerebellum hemisphere, and left thalamus compatible with acute ischemic stroke in the vertebral-basilar territory. MRI angiography showed obstructed flow in the left vertebral artery with no other abnormalities. Thrombophilia-autoimmunity screening, syphilis, and HIV tests, ECG, echocardiogram, cerebral spinal fluid, and chest x-ray were unremarkable. The patient treated with clopidogrel recovered properly in the following days. Therefore, we report the case of a patient with an ischemic stroke just after the first course of chemotherapy. She did not have other risk factors for cerebrovascular disease.

Vascular events have been described as a rare complication in relation to anticancer drugs.⁴ Specifically, some authors have reported events in relation to cisplatin,^{1-3,5-7} as well as to the combination of cisplatin, etoposide, and bleomycin.^{2,5,6} We have not found any other case in literature of occlusion of a big cerebral artery induced by chemotherapy. Cases of aortic and other peripheral artery occlusion have been described.^{3,4,6} As for brain arteries, only cases of carotid branch thrombosis have been found.^{2,7} The case reported here would be the first one related to a vertebral artery.

The mechanisms of such vascular events are probably multifactorial (endovascular damage, platelet aggregation, vasospasm or abnormalities in the coagulation cascade directly produced or induced by chemotherapy).^{1-3,5-7}

In agreement with all the referred authors, it is concluded that once a vascular event has occurred, discontinuation of cisplatin-

based chemotherapy is mandatory.⁸ In this case cisplatin was changed for carboplatin. Some authors recommend preventing vascular events with anticoagulation in patients who are undergoing chemotherapy.^{4,6,9} Thus, more studies should be performed to confirm in which of these patients would it be appropriate.

Disclosures

None.

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