Antineoplastics

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Cardiac insufficiency and polyneuropathy: 2 case reports

In a case series, a 22-year-old man developed cardiac insufficiency during treatment with doxorubicin for primary stage IV mediastinal large B-cell lymphoma (PMBCL) and, a 56-year-old man developed polyneuropathy during treatment with folinic acid, fluorouracil and oxaliplatin for metastatic sigmoid cancer and unresectable liver metastases.

Case 1: A 22-year-old man developed cardiac insufficiency during treatment with doxorubicin for primary mediastinal large B-cell lymphoma. The man was admitted for the diagnosis of mediastinal tumour. A biopsy confirmed PMBCL, which spreaded to thoracic wall, ascending aorta and pulmonary trunk. Also, two satellite tumours in the right lung; lymphoma tumours in the pancreas, pelvis, 10th right rib and proximal end of right humerus with pathological fracture were noted. Thus, he was diagnosed with stage IV PMBCL. Therefore, orthopaedic surgery of the pathological fracture was planned and then to initiated chemotherapy. He was then found to be positive for SARS-CoV-2 infection. He reported chest discomfort, which was present before SARS-CoV-2 infection. Due to the advance PMBCL, he received pre-treatment with cyclophosphamide and prednisone. Following completion of pre-treatment, he started receiving chemotherapy with CHOP-14 regimen, which comprises of cyclophosphamide, doxorubicin 50mg/m^2 [*route not stated*], vincristine and prednisone. Rituximab was not used initially due to the risk of negative effect on SARS-CoV-2 infection. Chemotherapy was supported by filgrastim [G-CSF] and prophylaxis of tumour lysis syndrome. Following two cycles of chemotherapy, partial response of the lymphoma was achieved. However, he reported of increased chest discomfort and tachycardia was noted. ECG demonstrated no abnormalities. Echocardiography revealed myocardial injury with generalised hypokinesis and decreased ejection fraction (EF), aortic valve regurgitation and tachycardia. Biochemical markers of myocardial injury such as troponin I, NTproBNP and CK-MB mass were within normal ranges. Doxorubicin, an anthracycline chemotherapy drug, was determined to be responsible for the development for the cardiac insufficiency [*time to reaction onset not stated*]. Thus, he was then treated with unspecified ACE inhibitor and beta-blocker, which provided good results. The third and fourth cycles of chemotherapy were administered, with doxorubicin-liposomal [Myocet] replacing doxorubicin in CHOP-14 regimen. Thereafter, a SARS-CoV-2 test was negative. He continued treatment with chemotherapy with R-COMP regimen, which comprises of prednisone, cyclophosphamide, vincristine, doxorubicin-liposomal along with rituximab.

Case 2: A 56-year-old man developed polyneuropathy during treatment with folinic acid, fluorouracil and oxaliplatin for metastatic sigmoid cancer. His medical history was significant for coronary heart disease. He had myocardial infarction in 2015, with coronary artery angioplasty. He underwent sigmoidectomy in November 2019, and was diagnosed with sigmoid adenocarcinoma at that time. In January 2020, he started receiving chemotherapy with FOLFOX4 regimen, which was comprising of folinic acid, fluorouracil and oxaliplatin [*not all dosages stated; routes not stated*] for metastatic sigmoid cancer. Following treatment with oxaliplatin, he reported grade 1 polyneuropathy. His polyneuropathy was determined to be related to chemotherapy of FOLFOX4 regimen. Due to polyneuropathy the dose of oxaliplatin has been reduced to 65 mg/m^2. Between 10 Novemeber 2020 and 12 November 2020, he received twenty first cycle of FOLFOX4 regiment. On 6 December.2020, SARS-CoV-2 antibodies were positive, which suggested that he has asymptomatic SARS-CoV-2 infection during chemotherapy. The next cycle of chemotherapy had to be postponed to a week later because of SARS-CoV-2 infection related grade 3 neutropenia. He continued to receive chemotherapy without any new side effects and complications [*outcome not stated*].

Wozniak K, et al. Chemotherapy During Active SARS-CoV2 Infection: A Case Report and Review of the Literature. Frontiers in Oncology 11: 12 Apr 2021. Available from: URL: http://www.frontiersin.org/Oncology/about

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