

Antineoplastics

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Cytopenia and COVID-19 pneumonia: 10 case reports

A retrospective, single-center, observational study of the records of 32 patients with active cancer, who were admitted to a hospital in Japan with COVID-19 pneumonia between 31 January 2020 and 25 May 2020 described four women and six men, aged 53–90 years, who developed lymphocytopenia, pancytopenia, decrease in lymphocyte count or COVID-19 pneumonia during anti-cancer treatment with anastrozole, azacitidine, bendamustine, bicalutamide, brentuximab-vedotin, cyclophosphamide, doxorubicin, fluorouracil, letrozole, leuprorelin, nedaplatin, pembrolizumab, prednisolone or rituximab.

The patients had myelodysplastic syndrome overt acute myeloid leukaemia (1 patient), anaplastic large cell lymphoma (1 patient), prostatic cancer (2 patients), breast cancer (2 patients), mantle cell lymphoma (1 patient), Waldenström's macroglobulinaemia/lymphoplasmacytic lymphoma (1 patient), oesophageal cancer (1 patient) and lung cancer (1 patient). They started receiving chemotherapy with azacitidine [azacytidine; 1 patient], brentuximab-vedotin, cyclophosphamide, doxorubicin plus prednisolone (1 patient), leuprorelin [Leuprorelin acetate] after intensity modulated radiotherapy (1 patient), letrozole (1 patient), bendamustine plus rituximab (2 patients), anastrozole after operation (1 patient), nedaplatin and fluorouracil [5-fluorouracil; 1 patient], bicalutamide after operation (1 patient) and pembrolizumab (1 patient) [routes and dosages not stated]. Six of these patients had comorbidities including hypertension, asthma, coronary heart disease, diabetes or chronic obstructive pulmonary disease. After 7–23 days from the initiation of chemotherapy five of these patients developed COVID-19. Out of remaining five patients, four patients developed COVID-19 within 30 days after receiving respective chemotherapies, while the remaining one patient developed COVID-19 >200 days after receiving pembrolizumab [not all durations of treatments to reactions onsets clearly stated]. All the patients were diagnosed with COVID-19 by RT-PCR assay for SARS-CoV-2. Imaging studies showed radiological features of pneumonia. Therefore, all the patients were diagnosed with COVID-19 pneumonia. Six of these patients developed acute respiratory distress syndrome. The neutrophil counts were 660–8810 $\times 10^6/L$. All the patients had low lymphocyte counts between 160–1580 $\times 10^6/L$. Lymphocyte counts $< 800 \times 10^6/L$ were considered as lymphocytopenia (n=6). One of these six patients also developed pancytopenia. The ongoing chemotherapy was considered as a risk factor for the low lymphocyte counts (including lymphopenia), pancytopenia and COVID-19 pneumonia. The patients were admitted to the hospital in Japan, and received off label treatment with favipiravir (5 patients), favipiravir, hydroxychloroquine plus methylprednisolone (1 patient), favipiravir, ciclesonide and prednisolone (1 patient), favipiravir, hydroxychloroquine and ciclesonide (1 patient), favipiravir and hydroxychloroquine (1 patient) and favipiravir and methylprednisolone (1 patient). Additionally, eight of these patients required supportive oxygen therapy. Six of these patients died due to COVID-19 pneumonia, while the remaining four patients tested negative for SARS-CoV-2 on RT-PCR [not all outcomes stated].

Nakamura S, et al. Characteristics and outcomes of coronavirus disease 2019 (COVID-19) patients with cancer: a single-center retrospective observational study in Tokyo, Japan. *International Journal of Clinical Oncology* 26: 485–493, No. 3, Mar 2021. Available from: URL: <http://doi.org/10.1007/s10147-020-01837-0> 803555393