New Therapeutic Scheme for ES-SCLC

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Letter to the Editor

Lung cancer is the leading cause of cancer death and accounts for about one fifth of all cancer deaths. Small Cell Lung Cancer (SCLC) has a particularly poor prognosis, as about two thirds of these patients are diagnosed with Extensive-Stage Small Cell Lung Cancer (ES-SCLC), thus highly aggressive and fast-growing. ES-SCLC is a form of lung cancer that typically recurs and progresses rapidly, despite initial response to chemotherapy.

Durvalumab is a human IgG1 kappa monoclonal antibody that blocks PD-L1 binding to PD-1 and CD80 and prevents PD-L1-mediated inhibition/suppression of T-cell activation. This blockade releases the inhibition of immune responses without an antibody dependent cell-mediated cytotoxicity, and counteracts the ES-SCL immune-evading tactics. Durvalumab has recently been approved for the 1st-line treatment of adults with ES-SCLC in combination with etoposide and either carboplatin or cisplatin [1,2]. Approval was based on the findings of the open-label phase III CASPIAN trial [3], with a significant increase in the median overall survival with Durvalumab plus chemotherapy vs. chemotherapy, sustained after a median follow up of more than two years [4].

We report a case of one patient with stage IVB of small cell lung cancer proposed for Durvalumab in association with carboplatin and etoposide under the compassionate use program reimbursed by AstraZeneca, followed by Durvalumab in maintenance. A 67-year-old man presented to the emergency room, in May 18th, 2020, with a one month-long anorexia, neck pain and recent productive cough with moderate dyspnea. He had a history of smoking and Pulmonary Obstructive Chronic Disease (COPD), besides a previous myocardial infarction complicated by cardiac failure. Initial exams revealed a right upper bronchial tumor with mediastinal and peri-vascular extension and the patient was admitted for definite diagnosis and treatment. Lung biopsies showed a small cell neuroendocrine carcinoma (immune reactivity to TTF-1 and proliferative index- Ki67 of 90%) and it was staged T4N3M1c (pleural, pericardial and hepatic metastases and retroperitoneal adenopathies). After a Thoracic Oncology Multidisciplinary meeting, he was proposed to first line chemotherapy with Durvalumab in association with carboplatin and etoposide. The first treatment session occurred on the June 18th, 2020 without Durvalumab while expecting approval and, because of a superior vena cava syndrome, he was submitted to a total of 20 Gy radiotherapy treatments between June 29th and July 3rd, 2020. The patient had the second chemotherapy treatment in July 16th, but it was not before the third session, the August 7th, that he received the first dose of Durvalumab (1.5 g). This latter association was repeated three weeks later and imaging exams were repeated with CT-scans showing a partial response. The patient had two more similar treatments, totaling two initial cisplatin plus etoposide cycles and four subsequent cycles associated with Durvalumab (last one in October 13th, 2020). At November 3rd, CT scan showed criteria of stable disease and it was begun a maintenance chemotherapy strategy with monthly Durvalumab 1.5 g. Before the fourth maintenance treatment, the patient had a lipotimia and a brain CT scan showed a new metastasis, being administered the scheduled treatment and decided to rediscuss the case in the multidisciplinary meeting. In February, the patient was diagnosed with severe SARS-CoV-2 pneumonia and admitted for the specific treatment. Considering the adverse events along the treatment period, we documented Grade 4 neutropenia after the second session of cisplatin and etoposide association, that resolved with the regular use of pegfilgrastim from that on; asymptomatic ferropenic anemia evident after the fourth cycle (second cycle using Durvalumab) corrected with iron supplementation; and one episode of acute thrombophlebitis occurring after the fifth treatment and that resolved with empiric flucloxacillin.
The importance of documenting this case is due to the usefulness of describing the evolution of patients in real clinical practice scenarios, under a very recently approved therapeutic scheme for ES-SCLC.

References