

Bronchogenic Carcinoma with Multifocal Metastasis Revealed By SARS-Cov-2 Infection

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Introduction

COVID 19 (SARS-CoV-2 infection) was declared as a pandemic by the WHO on March 11th, 2020. Its mortality risk is correlated to its pulmonary complications and refractory hypoxemia. Therefore, the association cancer and SARS-CoV-2 infection is very widespread.

The authors of this article report a case of a bronchogenic carcinoma with multifocal metastasis revealed by SARS-CoV-2 infection emphasizing the difficulties of management; COVID 19 or lung cancer: what should we treat?

Case report

55 years old male, chronic smoker at 13 pack years, admitted in the ICU for SARS-CoV-2 pneumonia. One month earlier, the patient had asthenia, anorexia and weight lost. Then he presented headache, fever, dry cough in addition to hemoptysis.

Following a positive PCR test conducted at a regional hospital, the patient was admitted into our facility. During his admission the patient was conscious (GCS 15/15), dyspneic with a respiratory rate at 26 cycles/min and oxygen saturation 100% under 8L/min of oxygen. His blood pressure was 129/90 mmHg, with pulse of 87 beats per minute.

CBC showed an anemia at 6.8 g/dL, lymphopenia of 290/mm, WBC 8390 el/mm³ Platelets of 319000 el/mm³. D-dimers were 550 µg/L, fibrinogen at 8.15g/L, troponins at 2.6 ng/L and BNP at 41 ng/L. Electrolyte panel tests showed normal potassium level (4.1 mEq/L), sodium at 130 mEq/L, ferritin at 127 ng/L and CRP of 203.

A chest CT-scan showed an irregular solide and excavated nodule in the right upper lobe and bilateral ground-glass opacity with ganglion infiltration and right adrenal gland metastasis. (Figure 1).

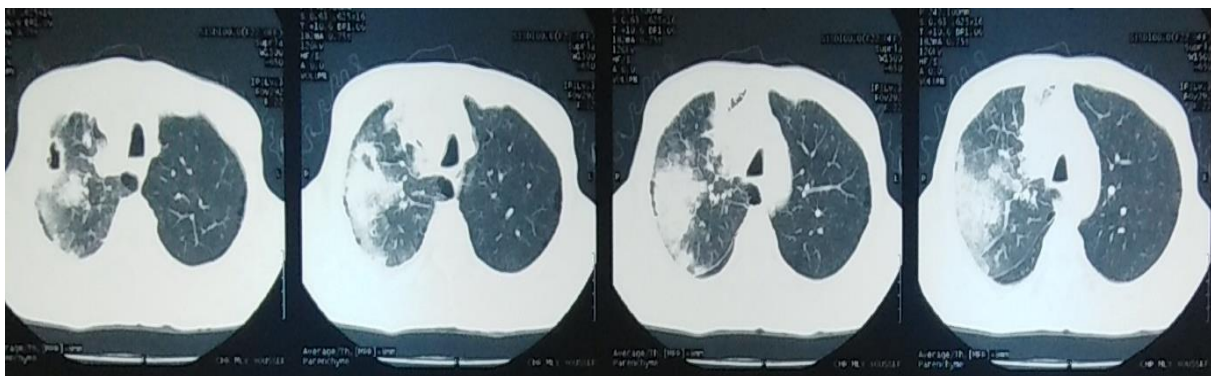


Figure 1: Axial chest computed tomography findings in a 55-year-old male with adenocarcinoma of the right lung also infected with COVID-19.

In the face of persistent headaches, a cerebral CT-scan was demanded. Two brain lesions highly suspicious for metastases were identified. (figure 2).

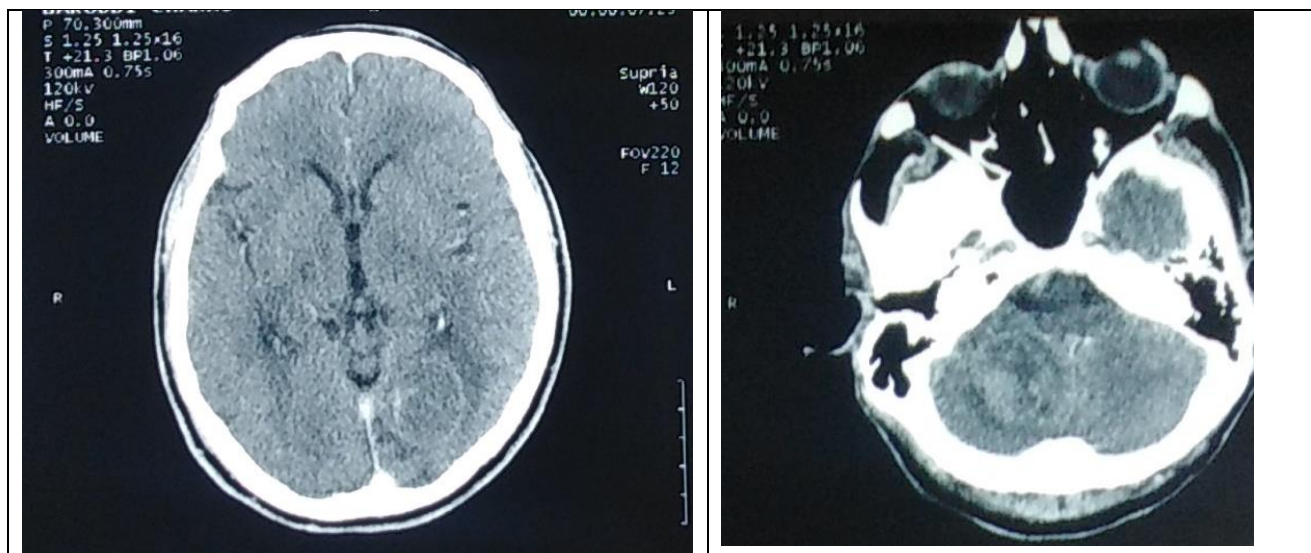


Figure2: Axial cerebral CT- scan findings in a 55-year-old male with cerebral metastasis of the left occipital cerebral hemisphere and in the right cerebellum hemisphere.

Following the patient's status stability, the therapeutic care was based on Hydroxychloroquine sulfate (200 mg *3/day), azithromycin (250 mg/day) for 7 days, methylprednisolone (2mg/kg/day), enoxaparin sodium (0.6UI *2/day), vitamin C, vitamin D and zinc.

According to the pulmonologist and oncology teams, an adrenal gland lesion biopsy should be performed after ruling out pheochromocytoma.

After 7 days of treatment the PCR test control was came back negative. Then the patient was transferred to the pulmonology department to continue his lung cancer management.

Comment

Management of patients with lung cancer in the era of COVID-19 has become a global concern. Lung cancer and SARS-CoV-2 infection can manifest heterogeneously, ranging from an asymptomatic condition to severe respiratory distress requiring urgent treatment or intensive care. Then, in most cases, treatments of lung cancer are chemotherapy, immunotherapy, or combination strategies.

In this context, patients have a higher risk of developing severe or lethal SARS-CoV-2 complications. In addition, there is an increasing debate on potential interactions between coronavirus and anticancer therapies. Chemotherapy can cause immunosuppression and favor infectious complications. Conversely, patients receiving immunotherapy should be more immune reactive.

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