

Cancer Treatment During COVID-19 Pandemic: Delay or Continue Chemotherapy

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Abstract

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV2) and its clinical manifestation, the coronavirus disease 2019 (COVID19) have rapidly spread across the globe, leading to the declaration of a pandemic. While most present mild symptoms, it appears as though nearly 20% of confirmed patients develop significant complications.

At this time of uncertainty, we are struggling to provide appropriate care to cancer patients. we have to weigh risk and benefit of giving cancer treatment vs chances of getting them infected with COVID-19. As cancer patients are immunocompromised and there are high chances of exposure during hospital visits and if they get infected, outcome can be fatal. So, through the column of this article, Given the limited number of clinical cases reported about "should patients stop their chemotherapy during the COVID-19 pandemic?", we would like to report a case and share some experiences.

Keywords: Chemotherapy, COVID-19

Introduction

The emergence of coronavirus disease 2019 (COVID-19) has caused a global public health emergency. In December 2019, an outbreak of respiratory disease caused by a novel coronavirus was first detected in China and has now spread to more than 150 countries [1].

This new type of respiratory illness is characterized by rapid human-to-human transmission, having achieved pandemic spread [2] therefore, the World Health Organization (WHO) declaring the novel coronavirus outbreak a pandemic [3–4]. Patients with cancer are more susceptible to infection than individuals without cancer, because malignancy and chemotherapy result in an immunosuppressive state, and have worse outcomes from SARS-CoV-2 than other individuals without cancer [5].

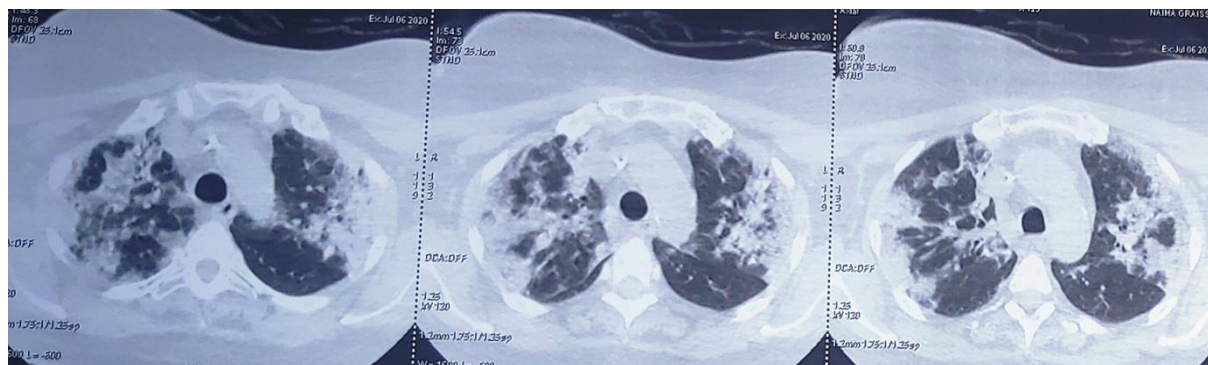
Case report

we report the case of 61 years old woman, with a history of right breast cancer in 2014 (conservative treatment, radiation and chemotherapy), right intra tubal adenocarcinoma (extended hysterectomy and chemotherapy) in 2018 (later pelvic left recurrence: tumor

reduction surgery and 2/3 CMT treatments started in 2018, the last session on 06/15/20) the history of the patient goes back to 02/07/20 by the appearance of a flu-like syndrome made of unencrypted fever and chills, which motivated the patient to consult and symptomatic medical treatment was prescribed. the same day the symptomatology worsened by the appearance of a dry cough and dyspnea of progressive aggravation, which motivated a second consultation on 05/07/20. the thoracic CT showed an aspect suggestive of viral infection, supplemented by a positive COVID PCR. patient was admitted and referred to the dedicated COVID-19 ICU.

Examination on admission shows a conscious 15/15 patient, hemodynamically stable (BP: 12/07 and HR: 80bpm), polypneic with a respiratory rate at 30c /min and arterial oxygen saturation at 88% at room air, apyretic (T °: 37.5), with bilateral humming groans on pleuropulmonary auscultation.

The chest-CT reveled air bronchogram associated with ranges of diffuse ground glass opacities at the level of the two pulmonary fields, the viral origin of which is very likely with severe parenchyma involvement (50%-75%).



Chest-CT scan revealing air bronchogram associated with ranges of diffuse ground glass opacities.

The ECG shows regular sinus rhythm at 79bpm, PR fixed at 0.18, fine QRS without repolarization disorder, QT corrected at 370 ms. The transthoracic ultrasound showed no left ventricle dysfunction, an ejection fraction estimated at 65%, no valvular leakage or stenosis, a good right ventricle systolic function.

The patient's biological assessment revealed a white blood cell number of 5,270 cells/ mm³ (Neutrophils 3060, lymphocytes 1540), hemoglobin of 8.2 g / dl, thrombocytes at 481,000 cells / mm³. Prothrombin time and partial thromboplastin time were normal (TP at 72% and TCA at 23.5s for a witness of 23s). fibrin fragment D-dimer at 1980 ug / l.

Natremia:140 mmol / l, kalemia: 4.1mmol / l, 77 g / l of proteins and 38 g / l of albumin, correct liver and renal function (urea: 0.24 g / l and creatinine: 8.4 mg / l, ASAT : 20 IU / l and ALT: 17 IU / l), fasting blood sugar at 1.2 g / l, C-reactive protein at 50.2 mg / l then 32 mg / l (05/07/20) then 26 mg / l (07/11/20), Troponin at 3.5 ug / l therapeutic management included oxygen therapy, non-invasive ventilation at 40% FIO₂ (PEP at 5 and IA at 12) based on 4 sessions per day the first 48h followed by 2 sessions on the 3rd day medical treatment associated Hydroxychloroquine 200 mg 3 times a day, Azythromycin 500mg the first day then 250mg per day, methylprednisone at 80mg a day for 7 The COVID-19 PCR test on day 9 and 25 were both positive. Patient was discharged to be home confined for 14 more days followed by oncologic consultation.

Discussion

A major dilemma is whether to delay chemotherapeutic treatment or continue it for patients with cancers who are currently on chemotherapy or about to start chemotherapy with curative intent. As per Liang et al. [6], patients who have undergone cancer chemotherapy within the previous 1 month have a higher risk of clinically severe disease as compared to those who did not have chemotherapy (3/4 [75%] patients vs. 6/14 [43%] patients, odds ratio [OR] 5.34, 95% CI 1.80–16.18; $p = 0.0026$).

The oncology community has been under increasing pressure to protect cancer patients and ensure their safety while maintaining treatments [7]. This complex task brings with it an emotional struggle as we balance the desire to

cure or treat our patients, with the fear of losing them from infection [8,9].

During this pandemic, the potential for benefit with chemotherapy would be unchanged, but the risk of harm would be increased to a degree that cannot be readily quantified. Patients who underwent chemotherapy or surgery in the month before diagnosis with COVID-19 had a numerically higher risk of clinically severe events than did those not receiving chemotherapy or surgery [10].

Conclusions

New cases of COVID-19 continue to increase worldwide with an alarmingly high mortality among patients with cancer who are elderly, have comorbid illness, and/or are immunocompromised due to their cancer treatment or another underlying disease state. Therefore, while delayed chemotherapy is not part of contemporary practice, we should use the level 1 evidence supporting the delay of chemotherapy without worsening of long-term cancer outcomes in appropriate patients to reduce the risk of COVID-19 transmission and early death.

Competing interests

The authors declare no competing interests.

Authors' contribution

All the authors contributed equally in drafting of the manuscript. All the authors read and agreed to the final manuscript.

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