COMMENTARY

Lung & Gynecological Cancers: Has COVID-19 Impacted Patients?

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ABSTRACT

Coronavirus disease- 2019 (COVID-19) presented as case of viral pneumonia of unknown etiology is diagnosed by Reverse Transcriptase Polymerase Chain Reaction (RT-PCR) test of the samples from upper and lower respiratory tract. It can present as a mild flu-like illness for healthy adults yet it may become a life-threatening disease for the immunocompromised, such as cancer patients, by predisposing them to respiratory pathogens which may manifest as life-endangering pneumonia. Physicians should carefully evaluate their patient's disease process and tailor treatment for individual patients to ensure that before doing beneficence, no further harm is done. Whether this is a wrinkle in time or the new normal, time will tell, but in light of recent evidence, 'extra' caution is the way forward.

KEYWORDS: COVID-19, Lung Cancers, Gynaecological Cancers.

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Coronavirus disease-2019 (COVID-19) is a viral infection which presented in December 2019, primarily in the Wuhan city of China and presented as cases of viral pneumonia of unknown etiology. Reverse Transcriptase Polymerase Chain Reaction (RT-PCR) testing of the upper and lower respiratory tracts identified the organism to be a mutated zoonotic coronavirus which was different than its sister strains that caused Severe Acute Respiratory Syndrome-Coronavirus-1 (SARS-CoV-1) and Middle Eastern Respiratory Syndrome (MERS).[1] What started off as an epidemic soon evolved into a World Health Organization (WHO) declared pandemic with patients being identified positive for Severe Acute Respiratory Syndrome-Coronavirus-2 (SARS-CoV-2) all around the globe. At the time of writing this manuscript, April 19th 2020, the total number of cases was approximately 2,332,456 with 160,784 deaths (mortality rate = 6.89%) recorded all over the world as reported by Worldometer.

What might present as a mild flu-like illness for healthy adults may become a life-threatening disease for the immunocompromised, such as cancer patients, by predisposing them to respiratory pathogens which may manifest as life-endangering pneumonia. These individuals are 3.5 times more susceptible to developing severe form of the disease, requiring mechanical ventilation and continuous intensive care support.[2] Zhang et al.[3] reported high mortality rate in cancer patients reaching critical illness as compared to the general population cohort (28.6% vs 2.3%), all having received anti-cancer treatment 14 days prior to COVID-19 diagnosis.The relative presence of

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anemia and hypoproteinemia in cancer patients predisposes them to possible nutritional deficiencies, making individuals susceptible to respiratory pathogens.[3]

As far as lung cancers are concerned, a superimposed COVID-19 infection can result in drastic outcomes. Precision medicine is the key intailoring a plan for management of theindividual patients, but certain guidelines have been laid down to manage non-Small cell lung cancer (non-SCLC) and Small cell lung cancers (SCLC). Banna et al.[4] emphasized weighing the risk to benefit ratio (RBR) before initiating therapy. The authors insisted that the RBR would suggest against the administration of adjuvant chemotherapy, however neoadjuvant therapy should be initiated for resectable tumors, in anticipation of restricted surgical access.[4]

For old aged patients and those having performance status 2 (PS2) according to Eastern Cooperative Oncology Group (ECOG) the immune checkpoint inhibitors oral chemotherapeutic agents are suggested. Radiotherapy (RT), either concurrent or sequential to chemotherapyshould be started when possible in patients with good respiratory function having stage 3, non-SCLC and limited-stage disease of SCLC. The RT should be started on day 1 of chemotherapy so that only 2 cycles are then needed. Third and beyond lines of chemotherapy should not be started without justification.[4]

For gynecologic cancers, Ramirez et al,[5] recommends that low-grade cervical cancer screening be postponed by 6-12 months and high-grade to up to 3 months. Surgical interventions for early stage cervical cancers can be undertaken, depending on the intuitions COVID-19 policy planning. In the setting of surgical restrictions, steps should be taken to localize the disease using computed tomography (CT) or positron emission tomography–computed tomography (PET/CT) and follow-up regularly. The basic idea is to postpone procedures that require prolonged operative time or can result in complications for a period of minimum 6 – 8 weeks. Neoadjuvant chemotherapy is desirable if there is evidence of gross visible tumor. Locally advanced cervical cancer should be dealt with hypo fractionation (increased dose/day and decreased number of fractions) to reduce the number of visits to the hospital in an attempt to limit exposure to the virus.[5]

In the setting of endometrial cancer, low-risk (grade 1 disease) patients should undergo non-surgical conservative management, whereas high risk (grade 2 and 3 disease) should be considered for simple hysterectomy with bilateral salpingo-oophorectomy, with or without sentinel lymph nodes removal. For advanced cases, tissue biopsy should be considered for diagnostic evaluation and subsequent therapeutic strategies should be formulated.[5]

For ovarian cancers, suspected early disease cases should have a thorough evaluation to assess their risk of malignancy in the adnexal mass. Consider tissue biopsy for advanced staged ovarian cancer patients and upon diagnosis, neoadjuvant chemotherapy and then surgery should be pursued once COVID-19 restrictions resolve. In patients who have completed up-front adjuvant platinum-based chemotherapy, no further treatment should be considered.[5]

In the end, precision medicine is the key. Physicians should carefully evaluate their patient's disease process and tailor treatment for individual patients to ensure that before doing beneficence, no further harm is done. Whether this is a wrinkle in time or the new normal, time will tell, but in light of recent evidence, 'extra' caution is the way forward.

CONFLICT OF INTEREST

None to declare.

FINANCIAL DISCLOSURE

None to disclose.

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Author's Contribution

MTW: Conception and design of published data.

MIS: Acquisition of published data.

SSB: Final approval of the version to be published.

AD: Critical revision for intellectual content, final approval of the manuscript.

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