

Solicitousness Towards Elderly Oncology Patients During the COVID-19 Crisis: A Viewpoint

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COVID-19 has been declared as public health emergency. The severity of this illness seems more peculiar in patients having compromised physiological reserves like elderly, infants, pregnant women and in those with preexisting or uncontrolled comorbidities. The elderly patients, in particular, have additional risks which are related to both malignancy and ageing, hence such an infection could be life-threatening. Further, the available clinical experiences have shown that cancer patients with COVID-19 infection have more severe illness with very serious complications that may require intensive care. Hence, taken together into account it becomes pertinent to highlight on elderly oncology patients during the COVID-19 crisis. The viewpoint thus, takes into consideration the association and impact of COVID-19 pandemic on elderly oncology patients and also emphasises on possible treatment alterations to be adapted, during the COVID-19 crisis.

Introduction

The novel coronavirus disease 2019 (COVID-19) pandemic has impacted the health sector worldwide. WHO declared it as public health emergency on March 11th, 2020 [1]. This respiratory virus is transmitted via direct contact or droplets from an infected person with a secondary attack rate of more than 90%. Hence, social distancing and containment along with proper hygiene have evolved as the key steps to flatten the transmission curve. Preliminary reports suggest that the chances of death due to COVID-19 infection among cancer patients is substantially high, possibly maximum in elderlies i.e. patients more than 60 years and those with pre-existing lung disease. Although both the young and old patients present with similar symptoms, namely fever along with cough and sputum, elderlies tend to have more complicated disease course with very severe pneumonia, a raised requirement of oxygen supplementation, higher levels of serum pro-inflammatory markers accompanied with multiorgan dysfunction [2]. Thus, compared to the overall community, older patients show a higher risk of acquiring the COVID-19 infection and its complications. The viewpoint thus focuses on the association and impact of COVID-19 crisis on elderly group of oncology patients along with possible alterations to be adapted to combat the crisis.

Association of Covid-19, cancer and elderlies

As stated earlier, the incidence of COVID-19 infection as well as their severity increases with age. The impact of advanced age, associated comorbidities and exposure to tobacco on the severity of infection was first highlighted by Wang et al., where they concluded that patients above 70 years of age had a short median duration from the onset of symptoms to death as compared to young patients (11.5 days vs 20 days), thereby emphasising on faster progression of disease in the elderlies [3]. Similar rates were also reported from Italy by Livingstone et al, 12.5% in 70-79 years, 19.7% in 80-89 years and 22.7% after 90 years [4]. However, these rates possibly reflect the adaptability based on individual health-care system and should be cautiously used to implement

health-care policies.

Cancer, in addition seems to be a risk factor for COVID-19 infection. As reported by Liang et al. from China that the case fatality rates were overall 2% fatality, but it increases to 8% for patients in the age group of 70-79 years and 15% for 80 years of age and above. Also, the pulmonary complication requiring resuscitation were higher in those suffering from cancer (39% vs 8%, $p < 0.05$) [5]. This rate showed a rising trend if a surgery or chemotherapy preceded the infection. Also, it was noted that, patients suffering from cancer showed a rapid deterioration than those without cancer (median duration between symptom onset to severe events: 13 days versus 43 days; $p < 0.05$, Hazard ratio 3.56) [6]. This is probably due to compromised immunity as well as higher risks of nosocomial infection during hospital visits. Moreover, in infected elderly, the respiratory complications appear earlier and are more severe.

Thus, it seems prudent that cancer and advanced age contributes significantly to the increased risk of COVID-19 infection.

Psychological Impact on elderly

The COVID-19 pandemic has affected both the physical as well as the mental health of the entire population. The lockdown, although essential, has been imposed suddenly, which added an extra burden to the pre-existing panic and anxiety. This may culminate into long-term psycho-social implications, which may outlast this pandemic itself. Due to generation gap faced by the elderly as well as the sensory and cognitive deficits, this group of people might be vulnerable targets of misinformation leading to inadequate precautionary measures. All of this has definitely converted COVID-19 into a global digital platform that can be extremely difficult for these geriatric people, who are staying alone, not technologically advanced, that further adds to their anxiety and apprehension. Also, social distancing can greatly affect people, causing loneliness, being separated from their family and loved ones. They easily become affected by grief and chronic stress, causing a long-standing psychological impact. Loneliness is a potential known risk factor associated with depression, especially with lack of physical activity. Preliminary reports have shown raised incidence of depression, post-traumatic stress disorder (PTSD) and adjustment disorders associated with loneliness [7]. Any type of stress is related with a falling trend in immunity, that can jeopardize the pre-existing weakened immunity in the elderly. Hence, they create a detrimental impact on public health, because the elderly, being the neglected part of the population, might serve as vulnerable "hidden pockets" of the disease which may lead to increased infection spread.

Adapting to treatment needs during COVID-19 crisis

General measures to be taken

- Descriptive evaluation of health status of patient, if possible virtual assessment by tele-medicine.
- Reducing the number of attendants to one per patient.
- Proper screening utilising contact history of all visitors, travel history, performing thermal testing at hospital entrances, outpatient as well as inpatient clinics.
- Encouraging scheduled hospital visits based on prior appointment, avoiding routine or long-term follow-up, and delaying non-emergency outpatient visits, e.g. response assessment.
- To emphasize on using personal protective measures, e.g. alcohol-based hand disinfectants and wearing a mask.

Surgery

- Oncological surgery, often an elective procedure has to be prioritized and may be accordingly delayed due to the limited availability of intensive care units, presently mostly dedicated to COVID-19 patients.
- If curative surgery has been performed, adjuvant treatment should be on high priority after assessing the risk-benefit ratio.

Chemotherapy

- Changing intravenous to oral systemic regimen, e.g. 5-fluorouracil replaced by oral capecitabine.
- Delaying chemotherapy for hormone responsive tumor, e.g. carcinoma breast and prostate.
- Prescribing a 3 weekly regimen instead of a weekly one.
- Prophylactic use of hematopoietic growth factors (filgrastim, darbepoetin etc) to reduce the incidence of febrile neutropenia and transfusion.
- Chemotherapy dose reductions may also be considered, especially if treated with palliative intent to reduce the risk of toxicities, resulting in hospitalization for supportive care.
- If suffering from COVID-19, systemic therapy to be delayed till complete resolution of symptoms.

Radiotherapy

- A shorter course of radiation with hypofractionation where feasible, e.g. carcinoma breast and prostate.
- Palliative radiation may be reduced to single fraction, especially for bone pain or cord compression.

Supportive care

- Prophylaxis for anti-emesis as well as rescue treatment for breakthrough vomiting must be prescribed.
- Adequate pain control using opioids, if necessary.
- Medications to control mucositis, oral prophylaxis and hygiene.
- Taking care of non-oncological medical conditions, proper pharmaceuticals to address the associated comorbidities, proper nutritional support, specific interventions to minimise the impact of frailty syndromes (cognitive impairment, disturbances in sleep cycle, altered bladder and bowel habits).
- For patients requiring frequent drainage of ascites and/or pleural effusion, use of permanent indwelling catheter seems wise to reduce hospital visits.
- A detailed discussion and counseling of patients and their attendants regarding the risk-benefit ratio depending on the cancer type, stage and prognosis should be done before choosing the

treatment option. The intent of treatment, radical or palliative amended protocols, if any during pandemic must be conveyed clearly to avoid any unnecessary ethical concerns.

- Family members should be encouraged to take care of their elderlies.
- Audio/video communications with peer sufferers and other members might help in boosting the morale of the elderly patients and should also be encouraged.

In conclusion, COVID-19 pandemic has affected the global population, with geriatric oncology being no exception. To attenuate the effect of COVID-19 on elderlies, their concerns need to be adequately met including food, medication, social and emotional support. Also every possible efforts should be made to educate and provide additional guidance to patients and their caregivers, who need to make difficult decisions regarding their cancer-directed treatment during COVID-19 crisis. Although, general physical measures and amended treatment protocols should be opted for during the COVID-19 crisis, quantifying the impact of it on the elderly group of patients should be encouraged through future studies.

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