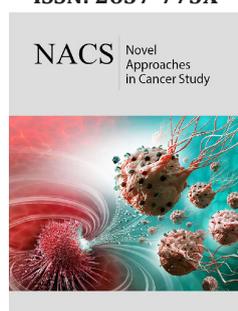


Radiotherapy Recommendations in Covid-19 Pandemia: Mini-Review

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Abstract

Management of cancer with radiotherapy during the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic is a novel and risky situation because of the higher mortality rates of COVID19 infection in immune compromised patients. To receive or to delay radiotherapy is a challenging topic with different scenarios. We reviewed updated literature and share some recommendations to the problems that every department of Radiation Oncology might face worldwide.

Introduction

Coronaviruses are one of the human and animal pathogens. A new coronavirus type was identified after pneumonia cases in Wuhan which is a city of China at the last month of 2019. This novel type of coronavirus resulted an epidemic throughout China and increasing number of cases in other countries worldwide [1]. In February 2020, the WHO (World Health Organization) announced the disease COVID-19 that representing coronavirus disease 2019. Severe acute respiratory syndrome that required intensive care is the possible complication of COVID-19 and can be fatal.

The WHO made a statement about the COVID-19 and initiated to characterize this disease as a pandemic to emphasize the important situation and warn the countries to act for detecting infection and preventing spread. Protection of health workers, older adults and those people with comorbid diseases were the highest priorities of the WHO. More than 1-meter social distancing, to wash hands with soap and water not less than 20 seconds and staying home as much as possible were the first basic recommendations in order to slow disease spread [2]. Incubation period of Covid-19 changes between 5 to 15 days [3]. Novel data about Covid-19 are 1 934 125 cases, 12 437 death and 456 599 recovered people at 14th April of 2020 according to the global media. 61 049 cases, 1296 death and 3957 recovered people were seen in Turkey with 410 556 total test number at the same day.

There were 17 million new cases of cancer worldwide in 2018. Four most common cancer occurring worldwide are lung, breast, bowel and prostate cancer. There will be 27 million new cases of cancer each year by 2040. There were 9.6 million death from cancer worldwide in 2018. Lung, liver, stomach and bowel are the most common causes of cancer death. Radiotherapy is one of the irreplaceable and corner stone treatment modalities for the cancer treatment. Problematic issue with Covid-19 pandemia was how to maintain the radiotherapy department activity with protecting firstly cancer patients, families and healthcare providers including radiation oncologists, physicists, radiotherapy technicians, nurses and other healthcare givers with whole department workers.

Problems and Recommendations

There are 7 problems needed to be given high importance for the cancer patients and the radiotherapy staff associated with radiation treatment.

1. Do not panic but protect yourself and your staff with proper equipment. Read the updated guidelines and recommendations. Share your experience with other healthcare givers.

2. First of all, radiotherapy should be managed if it is indicated in this pandemic period [4].

3. Safety of health professionals, patients and care givers must be ensured. Triage point at the entrance of hospital should be activated to follow the possible Covid-19 positive population including patients and caregivers [5]. Hand disinfection solutions should be provided in entrance, treatment facilities and clinics. Masks should be worn by patients, families and all health care providers.

4. Third problem is how to act with the symptomatic, suspect Covid-19 infected patients and healthcare professionals. The patients with cough, dyspnea or subfebrile fever associated with the ongoing cancer morbidity must wear a mask and maintain their radiotherapy courses. The patient group including symptomatic Covid-19 test positive, asymptomatic but incidental PCR test positive, symptomatic, PCR negative but thorax CT is compatible with Covid-19 should not be treated with radiotherapy and also stopped if RT initiated before by the time of end of infection treatment and getting negative PCR tests.

5. Organizing professionals in radio therapy facility is a must for the prevention and maintaining the cancer treatment. Mask should be worn by personnel and disinfectant solutions should be used before and after treatments [6]. The treatment rooms should be disinfected after every treatment of patient quickly. The staff should not be in close contact less than 1-meter. Shift system might be organized by administration of department.

6. Limiting the cancer patients for the access of radiotherapy departments should be managed for optimal care and protection of Covid-19 infection. Hypofractionation must be encouraged if possible. Delay follow-up visits after talking to

the patients. Benign and functional disease treatment with radiotherapy should be postponed. Radical radiotherapy of low-intermediate prostate cancer or adjuvant radiotherapy of low-risk breast cancer with DCIS (ductal carcinoma in situ) or etc. might be delayed.

7. Stay positive and keep your energy and your team to get rid of this pandemic closely soon using all the guidelines, experiences among Wuhan and all over the World.

Conclusion

Too many all the rules and recommendations will keep the cancer patients and health care givers to get infected with novel coronavirus. Do not forget the cancer patients are possibly immune suppressed and have a tendency to all infectious diseases.

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