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COVID-19 Rapid Letter

Covid-19 outbreak in a major radiation oncology department; which lessons should be taken? ☆



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Dr. Lutfi Kirdar Kartal Training and Research Hospital located in Istanbul is one of the biggest state hospitals in Turkey. Our radiation oncology department has been equipped with Cyberknife, Tomotherapy and three conventional linear accelerators with volumetric modulated arc treatment and intensity modulated radiation treatment capabilities. Brachytherapy can also be performed by three-dimensional brachytherapy planning. There are 15 radiation oncology specialists, 5 radiation oncology residents, 8 radiation physicists, 2 brachytherapy nurses, and 22 radiation therapists in our department. Approximately over 2000 new patients are treated in each year, and nearly 200 patients receive radiation treatment every day.

Recently, our educational program has been accredited by the Turkish Society for Radiation Oncology, being the fourth accredited center in our country. This accreditation visit was performed on March 9th of 2020 by the chairs and academic staff of three major departments of our country. Two of them was also the president-elect, and the past-president of our society. Hopefully, there was not officially reported Covid-19 case at the time of those recent events.

At the time of Covid-19 outbreak which started in December 2019 in Wuhan China, we were not aware of the seriousness of the situation and thought that China was too far away from Turkey. But in the miniaturized world, it didn't take long time for the virus to arrive in Turkey. The first virus infected patient in Turkey was reported on the 11th of March 2020, approximately 3 months later from China with a patient coming from abroad to our country. Our hospital has been immediately declared as one of the major pandemic state hospitals by Turkish Ministry of Health, and almost all oncology inpatient service beds were reserved for corona virus infected patients. Today, Turkey is declared as the 15th country in

the world according to the total 9217 infected patients, and 131 deaths from Covid-19 as we are reporting the current letter.

Unfortunately, our old radiation oncology building functioning since 1994 was planned according to the requirements of those years with small polyclinic and meeting rooms next to each other and no windows as in most of the other radiation oncology departments with extremely huge number of patients waiting to be treated or examined in front of our polyclinics, where social distance between patients and medical personnel could not be avoided.

The first Covid-19 infection in our department occurred after the contact of our senior staff (C.G.) with a patient in a small sized polyclinic room. After spending approximately 15 minutes together in that small room, the patient declared that he had recently come from Italy. Although the patient was asymptomatic, we thought that during his stay in the department for laboratory tests, several areas might have been contaminated by the virus. At the same time, one of our staff reported close contact with a person coming from abroad too. However, we continued our scientific meetings three times a week and social gatherings between staff like birthday celebrations. During these meetings, we were unable to maintain the social distance, which was by no means possible due to the small size of the meeting room. A few weeks after the declaration of the first case officially by the Turkish Ministry of Health, several persons in our department, starting with radiation oncologists, then medical physicists and technicians and lastly the brachytherapy nurse were presented with the classical symptoms of Covid-19 virus infection. Tests were positive in 13 radiation oncologists out of 18, while one physicist, one technician and one nurse were found to be positive at the time of writing of the manuscript. Five radiation oncologists were hospitalized due to high fever or pulmonary findings. Our hospital management committee has decided not to accept new patients, and we will refer them to other nearby centers till the exact situation of infection spread in our department are fully discovered and understood.

Turkish Society for Radiation Oncology announced immediate precautions to be taken for all radiation oncology staff and radiotherapy patients. In addition to these announcements, several suggestions have been published recently in the radiation oncology community for the continuation of radiation oncology practice in these days [1,2]. Our society has also written a letter to our Ministry of Health stating that limited human resources exist in radiation oncology community in Turkey, and no one in the other parts

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of hospital has the ability to take place of a radiation oncologist, medical physicist or radiotherapy technicians. Therefore, some of the staff in radiation oncology should be strictly reserved in clean area for the continuation of radiotherapy service for the safety of cancer patients. They also recommended that radiation oncology staff should not be given to Covid-19 treatment services if possible. Unfortunately, we are very close to shut down our radiotherapy service, if the remaining staff were also infected, which may also lead a catastrophe. We are screening and observing our radiotherapy patients for Covid-19 infection. Although we know that viruses are among important cancer causes and creates an important health problem, as in the cervical cancer, we witness for the first time in human history that viruses can prevent access to cancer treatments.

We are in a very serious 'double-trouble'. Therefore, we would like to share our unpleasant experience with our community.

Conflict of interest

No potential conflict of interest exists.

References

- [1] Achard V, Tsoutsou P, Zilli T. Radiotherapy in the time of the Coronavirus pandemic: when less is better. *Int J Radiat Oncol Biol Phys* 2020. <https://doi.org/10.1016/j.ijrobp.2020.03.008>.
- [2] Filippi AR, Russi E, Magrini SM, et al. Covid-19 outbreak in northern Italy: first practical indications for radiotherapy departments. *Int J Radiat Oncol Biol Phys* 2020. <https://doi.org/10.1016/j.ijrobp.2020.03.007>.