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NEWS AND COMMENTARY

Cancer care in the time of COVID-19 in Kurdistan region of northern Iraq

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Abstract

This paper focuses on the impact of coronavirus-19 infection crisis on cancer diagnosis, stage and treatment in Hiwa cancer hospital which is one of the leading cancer hospital in Iraq, discussing the need to evaluate the effect of delays in diagnosis and treatment on cancer stage and treatment, and to decide how to minimize these negative effects during current imposed lockdown and likely future cycles of emergency measures over the coming months and years.

Keywords: COVID-19; neoplasms; malignancy; communicable diseases; prevention & control; public health

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Hiwa cancer hospital is located in Sulaymaniyah city in northeast of Iraq and southeast of Kurdistan. The city houses a population of 800,000 people as of 2016. Hiwa cancer hospital was built by government and run by both government and charitable donations, Hiwa cancer hospital is the only cancer hospital in Sulaymaniyah city, it has 170 inpatient and 50 outpatient beds and yearly receive around 1600-2000 new adult hematology and oncology cases. 100% of all patients accepted for cancer treatment completely free of charge, irrespective of race or nationality.

Coronavirus-19 (COVID-19) is an emerging and rapidly evolving situation globally [1, 2], now Europe is the epicenter of the pandemic. France, Italy, England and Spain have imposed lockdowns [3]. By spread of the virus in neighboring countries especially Iran with whom we have very long border and the virus outbreak was very sever there, Kurdistan region government (KRG) took serious action in collaboration with Iraq government to prevent virus outbreak because Iraq and Kurdistan

region have very limited resources regarding ICU units, ventilation, personal protective measures and manpower. The KRG started with closing all borders especially with Iran, shutting down schools and universities starting from February 2020. By diagnosis of first case with COVID-19 in early March 2020, KRG imposed public holiday across all the Kurdistan Regional Government entities, except health and law enforcement departments, forcing people to stay home with keeping social distancing. All traffic movement between cities and towns were banned. A mayoral committee was formed with the participation of police and security forces to issue special permits in emergency cases. All Kurdish citizen who were outside Iraq was informed to return before the deadline of banning all flights from and to Iraq, all travelers where have to undergo screening by medical teams. Decision to halt all religious and ritual activities and ceremonies, including Friday sermons - in mosques, churches, and temples throughout the Kurdistan Region until further notice was made. With such strict action from the KRG and compliance of citizens to the orders, number of the cases was increasing in a slow manner of 3-4 cases per day. At time of writing (late April 2020) total diagnosed cases in Kurdistan region is 391 cases, of which 350 has been cured, 5 death and 36 active cases are available [4].

Covid-19 crisis made cancer care more complicated than it already is due to its expensive and prolonged treatment course [5]. Travel ban, economic uncertainty made normal cancer care delivery restricted. From another side cancer patients are thought to be particularly vulnerable, especially those who are undergoing active treatment with chemotherapy or radiotherapy and those with compromised immune systems are deemed to be at heightened risk of severe illness from COVID-19, as are those with cancers of the blood and bone marrow.

We tried to treat cancer patients in the same way as under normal circumstances but our hospital doesn't have ICU beds. Taking advantage from Italian experience [6] and other countries with high COVID-19 burden, along with guidelines [7-10] helped us to make some strategic decisions in Hiwa cancer hospital regarding cancer care during this crisis which was only protective measures in order to reduce traffic in the departments and to safeguard the health of the patients and the staffs.

We temporarily suspended admission of cancer patients with relatively mild disease, not taking new cancer cases, benign hematological cases was suspended and rapidly curtailed cancer follow-up visits, all chemotherapy and radiation treatments had to be changed to reflect the current reality, those patients that completed neo-adjuvant chemotherapy had to wait longer than normal for planned surgery, and may need to have additional cycles of chemotherapy. Individual chemotherapy cycles have been spaced out, and radiation treatments are being given in a more compact manner, with fewer fractions, aiming to decrease hospital visits.

For outpatient cases; only the patient was allowed to enter the hospital campus without their companions as its custom in our society that the patient comes with 2-3 of his/her relative, while for inpatient; visitors have been severely restricted. All patients had to wear mask and glove and limited number was allowed to enter at a time, for this purpose we placed a group of hospital staff at the entrance of the hospital to give directions and instructions to the patients.

Anyone entering the hospital campus, either patient or staff member, undergoes initial screening for symptoms associated with COVID-19 infection including fever, breathlessness and cough .All those with such symptoms had to wear mask and referred to a 24/7 hospital dedicated only for COVID-19 for further assessment . This facility is well equipped and staffed to provide all immediate care needed.

A second outpatient unit, formerly a gym hall dedicated for those cancer patients who finished their treatment course and on follow up, which is located next to the hospital, has been made available as a unit for blood aspiration and for receiving those cancer patient developing medical emergencies due to the chemotherapy or radiotherapy effects. Another special clinic was formed for phone consultation, from this clinic all patients were called and informed about this facility with overwhelmingly positive response. Every day a specialized team that included an oncologist, a hematologist and a pharmacist was responsible for this task, answering phone calls, providing all psychological support for the patients

for them to feel save while they are home, any needed investigation was ordered online by screenshot and sent to the patients by SMS to be done in any nearby hospital or medical centers, instruction were given about not coming to the hospital except in certain situation and specific indication to avoid unnecessary trips to the hospital. Although we don't have courier serves in our country, for any needed medication the patients had to buy it from outside, this was one of the biggest problems we face since most of the time; the patient couldn't buy necessary medications due to either ban or economic issue, this fact may have negative feedback on their cancer progression.

Radiology services continued to operate, for inpatients as well as for those on active cancer treatment, but only essential imaging studies are being carried out. All elective imaging and all screening activity have been stopped altogether. Laboratory and histopathology department continued their duties.

At the beginning we faced shortage of personal protective equipment (PPE), in particular of N95/ Filtering Face-piece Particles (FFP) masks, later on several local manufacturers stepped in and now are able to produce adequate surgical masks, gowns and other protective clothing except N95 masks with sufficient numbers to meet expected needs. Government and ministry of health are tasked with purchase, import and distribution of essential equipment, including PPE in particular. N95masks, but they are facing difficulties in sourcing such supplies due to global shortage and worldwide demand [7, 8].

These rules and regulations allowed us to segregate patients quickly, so that those who have symptoms suggestive of coronavirus infection, or a history of travel or contact, are directed towards centers dedicated only for COVID-19 , another fact that was in our and our cancer patients favor was that Hiwa cancer hospital is a small hospital dedicated only for cancer patients, it was easier to control it in comparison with other hospitals which include all surgical, medical, pediatric an gynecological departments.

Till now we have only one cancer death from COVID-19, who was middle age male with stage 4 colon cancer, multiple time progression, he was on palliative care and out of chemotherapy about 4 month before he got the virus. No other cancer patient registered with COVID-19.

Our study has important limitations, related to the fact that data was collected only from Hiwa Cancer Hospital in Sulaymaniyah firstly; secondly limited number of cancer patient infected with COVID-19 made difficulties to observe and understand any unusual pattern and relation between COVID-19 and cancer. Lastly, in general way registry is under estimated, till now many cases with COVID-19 have not been diagnosed nor registered. For this reason more study is warranted

We tried our best to ensure optimal service during this pandemic medically and psychologically to our patients but for sure all these limitations and restrictions will have detrimental effect on cancer care and survival locally and worldwide. we expect that there will be gush of new cases over next few weeks, more need for emergency operations and higher rate of progression of those cases who are already on treatment due to gaps in their treatment cycle and not been able to adhere to standard of care. Clearly there is a need to start to model the downstream effects of delay in screening, diagnosis and therapy for cancer patients, especially since it is likely that the coronavirus epidemic will have more than one peak with high probability of series of lockdowns. All these factors have the potential to impact cancer diagnosis, stage and survival.

For the time been regardless to the short term political and economic costs, public education like promotion of hand hygiene, effective social distancing and other preventive protocols must be rapidly and strictly implemented. Personal protective equipment for healthcare worker and facilities for critical care must be provided, and most importantly paying adequate attention to the extra human resources (nurses, trained intensivists, and respiratory care technicians) required for running these services.

Conclusion

Our study presented an overview regarding cancer care and management during COVID-19 pandemic and Effect of lockdown on cancer outcome. At this point sharing accurate information and best practices in real time is the most critical step to help

best cancer care. For the time been all academics and healthcare professionals from all cancer centers should stand together to overcome probably the greatest public health challenge of our generation, To put new strategy to minimize long term effect of lockdowns and varying degrees of closure of 'routine' clinical activity. This strategy may have proven to be effective against the coronavirus, but this benefit must be carefully weighed against its consequences of cancer outcome. Further studies and clinical trials are needed to identify effect of any pandemic on cancer care and outcome.

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Conflicts of interest

The authors declare no conflicts of interest.

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