

COVID-19 and Cancer: Optimizing Health Communication Through Telemedicine

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Abstract

The looming dark cloud of the COVID-19 pandemic refuses to leave us alone even after more than a year. Though healthcare workers have given their best and worked round the clock to combat this deadly virus, large scale and immediate relief is hardly anywhere in sight. This zoonotic virus has unleashed untold misery upon people globally especially on the ageing population with comorbidities. Patients suffering from various forms of cancer had to bear the brunt compounded in manners unforeseen. They were faced with a double-edged challenge to their very existence. Taking timely anticancer therapies and observing the required treatment frequency is one of the major challenges for patients battling cancer. This study attempts to evaluate the impact of COVID-19 on patients with cancer. A noteworthy finding was about telemedicine emerging as a boon for cancer patients in the COVID-19 pandemic times. However, there are several obstacles to overcome, such as accurate prescription interpretation, literacy, and connectivity, to name a few.

Keywords: SARS CoV-2, Cancer, Telemedicine, Health communication, e-consultation, virtual medicine

Introduction

Despite concerted efforts made globally

to contain and keep the deadly and rapidly changing virus in check, we are far from declaring the fight as over. In real terms, the goal posts have regularly shifted further away with newer revelations not just about the biology and behaviour of the virus but also the prognosis of the disease. It has enormously affected the general wellbeing globally¹. The SARS-CoV-2 was identified as the causal factor for a series of non-typical respiratory diseases in the Hubei Province of Wuhan, China in December of 2019. The disease SARS-CoV-2, termed COVID-19, was officially declared a pandemic by the World Health Organization on March 11, 2020². A survey conducted by the World Health Organisation (WHO) in 105 countries in July 2020 established that essential services were adversely affected in a number of countries. Immunisation, antenatal and childcare services suffered the most. About 45% of low-income countries experienced partial disruption of over 75% of services as compared to only 4% of high-income countries. And almost 60% of services were at least partially disrupted in South East Asian countries³. However, data from China have shown that the prognosis varies greatly between groups over the age of 60, including hypertension, diabetes, cardiovascular disease and cancer, which are identified as risk factors for serious illness and death⁴.

People with comorbidities who contract

the infection are doubly challenged when their illness is diagnosed as cancer. In such cases the fatality of cancer gets magnified several fold and COVID-19 seem to be a lesser pain. From taking therapies to surgeries, it's a constant prioritisation of treatment that both the doctor and the patient keeps making just to keep alive. An International Agency for Research on Cancer reckoned that the burden of cancer has increased globally and the year 2020 has reported a rise of 19.3 million cases with 10 million deaths due to cancer⁵. The resultant complications' arising out of comorbidity is further compounded by advancing age and obesity with increased risk associated with cancer⁶. A number of studies have been undertaken to evaluate the effect of various factors including mortality, telemedicine, palliative care, etc on cancer patients with COVID-19. This paper, therefore also makes an attempt to analyse the role of telemedicine related communication in the era of COVID-19 pandemic.

Global cancer prevalence

The International Agency for Research on Cancer (IARC) gauges that all around the world, 1 out of every 5 individuals are prone to cancer growth during their lifetime, and 1 out of 8 men and 1 out of 11 women kick the bucket from the infection. These new gauges recommend that more than 50 million individuals survive up till five years of a past cancer growth. Maturing populaces universally and financial factors stay among the essential components driving this expansion⁵.

According to GLOBOCON 2020 data, breast cancer growth involves 1 out of 4 tumors analyzed among women internationally. Moreover, colorectal, lung, cervical, and thyroid cancers are additionally regular among women as represented in figure 1 and lung malignant growth and prostate malignancy are the most widely recognized among men, together representing almost 33% of every male disease represented in figure 2.

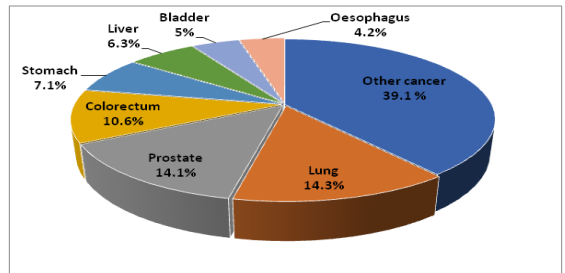


Figure2: Assessed number of new cases in 2020, around the world, men, all ages⁵

A projection estimates that along with missed screenings, delayed diagnosis due to the pandemic could lead to more cancer deaths over the next 10 years. In the US alone, National Cancer Institute (NCI) data points to an estimated 10,000 additional deaths between 2020 and 2030 from breast and colorectal cancers due to the COVID-19 pandemic⁷

Moreover, data about the ability to deliver appropriate cancer treatment during the COVID-19 pandemic are not sufficiently large to draw any definite conclusion, especially because of the conflicting infection rates and a small number of cancer patients⁸.

Cancer and COVID-19

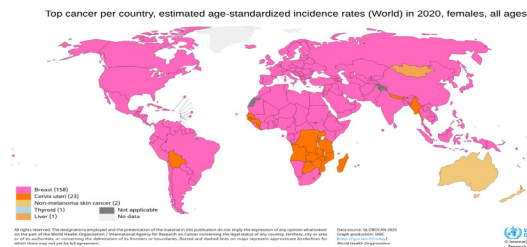


Figure1: Assessed number of cases in 2020, around the world, women, all ages⁵

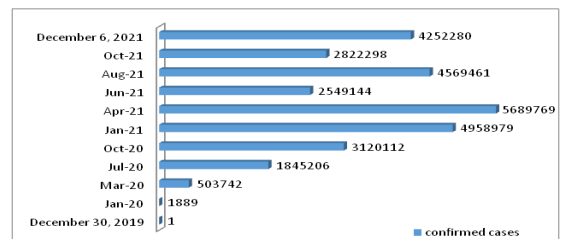


Figure 3: COVID-19 worldwide timeline (WHO)

The exceptional burden of COVID-19 on health frameworks worldwide has significant implications for cancer care⁹. Since the first case, the world has seen the terrible form of this virus many times and also saw the cases growing like fire (figure 3). The pandemic has tested our patience on various planes and from the point of view of cancer patients, it is like a double-edged knife where the danger sits on both sides. Liang et al. reported that cancer patients are more susceptible to adverse events and require an intensive level of diagnosis and ventilation which if not attended adequately and on time have resulted in more deaths, as compared to patients without cancer¹⁰. Whereas different technologies have taken the centrestage and become a handy tool for providing care to patients with cancer, one of them has decidedly been the telemedicine which has attracted special attention given the helplessness of pandemic because somewhere the risk on the lives of patients suffering from cancer is much higher than the pre-COVID-19 times. Survivors and patients of cancer are at higher risk of dying from COVID-19 and the fact has been corroborated by recent studies which show that old age and comorbidities are the contributing factors for the mortality in cancer from COVID-19¹¹.

The pandemic poses significant challenges for the management of patients with cancer, and in particular, those undergoing systemic anti-cancer therapy (SACT). This is a group who are at increased risk of infection with Covid-19 for several reasons, including the underlying disease process itself, the immunosuppressive nature of SACT, as well as the associated number of visits to hospital while undergoing treatment¹². Patients with cancer on active chemotherapy, radiotherapy, immunotherapy, targeted therapy, and immunosuppressants for bone marrow transplantation were considered to have higher risk for COVID-19¹³.

The meta-analysis and bioinformatics analysis identified lung cancer and colorectal

cancer as being two types of cancer susceptible to SARS-CoV-2 infection. Knowledge of the prevalence in different types of cancer can better define those COVID-19 patients at higher risk, and thus allow a more targeted and specific approach to preventing SARS-CoV-2 infection¹⁴.

A better understanding is required on how, and to what degree, COVID-19 causes physical reconditioning in mild, moderate, as well as severe cases. Whether this adjusts peri-operative risk for patients requiring cancer surgery requires further investigation to identify best timing for surgery and to tailor focussed prehabilitation for COVID-19 survivors¹⁵.

E-communication and Telemedicine in Cancer

During the COVID-19 pandemic, telemedicine rapidly evolved as an unprecedented integral channel of communication and was implemented to facilitate continuity of quality care and treatment¹⁶. Practicing virtual consultations not only reduces the risk of transmission to a great degree, it is also shown to help bridge the socio-economic divide where people in remote areas are continually faced with challenges in finding transportation solutions to reach cities and receive the required medical care.

Telemedicine is generally characterized as a blend of both advancements and gadgets ready to distantly acquire data about a patients' wellbeing status, so as to help in choosing if there is a need or earnestness to mediate¹⁷. Inadequate transportation and regulatory limitations by the governments has magnified the dependence on telecommunications whether it is taking online classes, remotely working from home, or telemedicine¹⁸.

During the COVID-19 pandemic, obligatory social separation and the absence of viable medicines have made telemedicine the most secure intuitive framework between patients, both tainted and uninfected, and clinicians¹⁹. Elkaddoum et al. suggest that using teleoncology helps to lessen the increasing

demand for personal protective equipment (PPE). Furthermore, the use of audio-visuals can also reduce the risk of infection that could be carried by the patient while visiting a doctor at hospital¹⁸.

In geographies that have to deal with large number of patients, the need for increasing the efficiency of virtual care interactions cannot be overemphasised. The concept of remote-‘shared medical appointments’ in which multiple patients with similar medical needs meet with a clinician at once, remotely, and where each receives individual attention, can greatly increase telehealth capacity by eliminating repetition of common advice. Remote shared medical appointments essentially virtualise in-person shared medical appointments (SMAs) which have been offered successfully in the United States for over 20 years. Patients get more time with their clinician. SMAs enable peer support and peer-to-peer learning. Providers who have offered SMAs have found them to improve both productivity and outcomes for many conditions, notably diabetes. eSanjeevani and other telehealth platforms could consider offering virtual shared medical appointments. Patients in different villages, with similar conditions can be seen at once remotely by a generalist or a specialist, during the pandemic. Compared to other nations, India is well poised to ramp up telehealth. WHO’s Global Strategy on Digital Health, adopted by the World Health Assembly, is a call to action providing a road map for nations to rapidly expand digital health services²⁰. It has been seen that telemedicine was extensively actualized to keep on giving top-notch medical care while lessening the danger for patients and staff. Even though it is harder for staff and clinicians, telemedicine offers a high-benefit administration to patients just as comfort and danger decrease²¹.

Though the adverse impact of the COVID-19 pandemic on cancer prevention among the screening-eligible public and on cancer treatment delivery to patients with active cancer is emerging⁴, a world-wide huge effort to

collect data on COVID19 and cancer has been performed over the last months, the available results should be interpreted with care as methodological flaws and poor statistics dilute their impact⁶.

There are definite indicators that establish the prognosis of cancer to be positively affected if the prevalent situation provides hindsight for planning the future course of treatment by the medical fraternity that may be faced with similar situations in times ahead even after the novel coronaviruspandemic has gone away.

Virtual health communication: A way forward

Researchers in health communication must consider the technical environment of health-related experiences in addition to the body, mind, and social components of health. According to our findings, cancer patients’ ties with technology for health-related objectives, as well as their relationships with physicians, are important factors in successfully engaging cancer patients with telehealth²². The use of telemedicine in cancer care on a daily basis may lead to more effective and long-term care models. However, the benefits and limits of this model of service delivery must be carefully evaluated, and all health care workers and patients must get adequate training and education²³. During a pandemic, patients generally accept telecommunication as a substitute for face-to-face in-person interaction with their physicians; the phone call is the most preferred method of communication, and the vast majority prefer to use patient-accessible electronic health records, according to the survey (PAEHRs)²⁴. Furthermore, patient literacy and socioeconomic variables may make communication difficult over the phone or via video. Prescriptions issued in this manner can potentially be misinterpreted, either by the patients or by the pharmacists, resulting in tragic outcomes. The answer is to have adequate internet connections, stable electricity, telecommunication workshops, and designated facilities such as post offices, dispensaries, and primary health care clinics

with good internet access and trained facilitators such as Accredited Social Health Activists (ASHAs)²⁵.

Conclusion

Cancer patients require extra care and support in the time of novel coronavirus pandemic especially in view of them being extra vulnerable to the infection. Besides, the emergence of telemedicine is proving to be a boon for patients who require immediate and quality medical consultation, especially through shared medical appointments which not only assures safety and comfort for the patient, but also a certain degree of being comfortable about sharing their concerns with the medical or surgical oncologists. The fact of health-care providers being reassigned from other specialties after the lockdown resulted in restricted provision of high quality care to cancer patients. Though the situation has changed for better of late, the risk, however, stills looms large. Follow-up and the prescribed precautionary measures will enable cancer patients to battle away the combined threats brought on by cancer which is visited by COVID-19.

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