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Maintaining a Medical Oncology Service during the Covid-19 Pandemic

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Introduction

In early December 2019, a cluster of viral pneumonias presented to medical services in Wuhan, China [1, 2]. The virus was subsequently identified as the novel coronavirus 2019 (COVID-19) [3]. COVID-19 spread rapidly from Wuhan to other cities throughout China, leading to significant morbidity and mortality and an unprecedented strain on the delivery of essential medical services [4]. The first case of COVID-19 in the Republic of Ireland was reported on March 1st, 2020. The COVID-19 pandemic has led to a lockdown of non-essential services and significant challenges to the national healthcare system, with the closure of elective and day case procedures and outpatient clinics.

Patients with cancer have been identified as a group of patients with a higher mortality rate if infected with COVID-19 [5], with a higher rate of infection and a higher incidence of severe events including admission to intensive care units, ventilation or death [6]. In Italy, up to 20% of patients who have died from COVID-19 had an active cancer [7]. This is likely due to their compromised immune system when receiving systemic anti-cancer therapy (SACT). Risk of infection is also higher in healthcare workers than the general population. In Italy, 20% of responding healthcare workers have been infected as of late March [8].

Guidance for oncology services during pandemics is non-existent and has evolved rapidly since this crisis began. The American Society of Clinical Oncology (ASCO) and the European Society of Medical Oncology (ESMO) have now issued guidelines on managing cancer patients during this pandemic [9, 10]. In the UK, the NHS has similarly issued national guidance for patients receiving SACT. Patients who are in line for curative therapy with a greater than 50% chance of success are in the highest level. Patients who are awaiting non-curative therapy that is unlikely to offer palliation, tumour control, or more than 1 year's extension of life are assigned the lowest priority level. In Italy, medical oncology services have continued in high priority patients at designated hospitals that were deemed COVID-19 free, with patients tested for COVID-19 prior to entry to that hospital [11].

The National Cancer Control Programme (NCCP) Ireland first issued guidance on March 12th, recommending that patients should continue to receive SACT following a risk benefit analysis [12]. The NCCP subsequently updated their guidance that treatment could be paused in those receiving supportive treatment or treatment with palliative intent, and that priority should be given to the continuation of treatment for those with curative intent, including the delivery of their treatment in an alternative hospital. On March 30th, the Health Service Executive announced that they would begin the acquisition of private hospitals in order to increase bed capacity during the pandemic.

The medical oncology service in the South East of Ireland is based in University Hospital Waterford (UHW), and consists of a day ward, an inpatient service, a specialist nurse led oral SACT service, a clinical trials unit and three satellite units delivering SACT in hospitals in Kilkenny, Clonmel and Wexford. Using NCCP guidelines and following discussion with local management in UHW and the UPMC Whitfield private hospital, and cognisant of our patients' and healthcare workers' safety, we strategically planned a major shift in the delivery of our service in order to be able to continue to provide a medical oncology service to patients during the COVID-19 pandemic. Given that social and personal distancing is a core guidance in the containment of this pandemic, communications around the changes outlined below have been difficult.

Day Ward Service

The day ward service in UHW consists of 12 bays and 2 isolation bays and on average treats up to 40 patients a day. After the first case of COVID-19 was identified in Ireland, immediate precautionary measures were implemented. This involved triage phone calls to all patients 24 hours before their attendance to the day ward to identify if they had any symptoms, recent travel to a high-risk area or close contact with a person with confirmed COVID-19 or suspected COVID-19. If a patient had no symptoms and their pre-assessment tests were normal, they could attend the oncology day ward at an allocated time to proceed with treatment. This allocated time system was implemented to reduce waiting times, to allow for social distancing in the waiting area and to deliver a fast turn-around so that the patient spent the least time possible in the hospital.

Due to the rapidly escalating number of cases nationally and the increasing concern about treating immunosuppressed patients in a hospital with active cases of COVID-19, it was decided to move the day ward in its entirety to a new hospital site, where no cases of COVID-19 had been identified. An unused clinical site at UPMC Whitfield was identified as suitable and viewed on March 18th. Over the following days, the site was prepared to be used and the necessary infrastructure to support a haematology oncology day ward was inserted. On March 23rd, all elective day ward patients for chemotherapy were transferred to this new hospital site. A pre-assessment clinic was established to review all patients 24 hours prior to treatment. Having successfully transferred the UHW day ward, all three satellite units were similarly transferred to new hospital sites. To date, all planned elective treatments have continued with no confirmed cases of COVID-19 in our outpatient cohort.

Inpatient Service

The oncology inpatient service in our hospital consists of twenty-four single rooms and is shared with haematology and palliative care services. Due to the anticipated increased need for isolation rooms in the hospital, it was decided to use the rooms reserved for oncology patients as isolation rooms for treating suspected and confirmed COVID-19 patients. A plan was drawn up to transfer all oncology patients to the UPMC Whitfield, where no confirmed cases of COVID-19 had been identified. Patients that were medically cleared were discharged and elective admissions were postponed until the transfer was complete. On March 30th, all haematology and oncology inpatients were transferred to the new hospital facility. Patients requiring multidisciplinary input including surgical care remained under the medical service in UHW. Unscheduled symptomatic patients were reviewed in the Emergency Department and were triaged appropriately. Patients with fever were tested for COVID-19. Patients who were COVID-19 negative and medically stable were transferred to the new hospital site. No reported adverse outcomes were identified during and after the transfer and to date no cases of COVID-19 have been identified in our patient cohort to date.

Outpatient Department (OPD) clinics

There are eleven OPD sessions a week in the South East cancer centre: four review clinics and four new patient clinics in UHW and a day long clinic in each of the three satellite clinics. There is also a fortnightly geriatric oncology clinic. At the time of writing this article, all review clinics and the majority of the new patient clinics are now conducted by telephone consultation. Guidance for telephone consultations is being provided by a consultant working with the National Healthcare Communication Programme who has expertise in communication modules for staff. A clear proforma has been developed for each telephone consultation and a patient satisfaction survey of the change in service from face to face interactions to telephone interactions is underway. The NCCP is in the process of piloting a video consultation service rather than telephone consults but this remains in development at present. Multidisciplinary team (MDT) meetings are now conducted remotely using video conferencing facilities.

Clinical Trials

Clinical trial recruitment is a key component of cancer service delivery. In our unit, multiple trials are available to patients across all cancer types. The European Medicines Agency have suggested that trial organisers consider suspensions, extensions, and postponements, depending on local circumstances [13]. In accordance with the NCCP and Cancer Trials Ireland, each of the clinical trials open at our site was assessed in terms of whether accrual would continue and whether patients should remain on treatment. Having transferred our day ward services to another hospital, we are able to continue to provide clinical trials during the COVID-19 pandemic. Patients were updated and reconsented as appropriate. To reduce patient visits to hospital, patients are contacted by phone where appropriate.

Conclusion

The COVID-19 pandemic presented many challenges that could never have been foreseen by any medical oncology department or indeed by any national or international health service. Adding to this challenge was the fact that cancer patients, due to their immunocompromised state are a cohort of patients at risk of developing more severe symptoms and worse outcomes [6]. With collaboration from medical professionals, nursing staff, allied health professionals, clerical workers, management and the private sector, we have shown in the South East that it is possible to continue to provide a medical oncology service during a pandemic while making significant changes in how and where we deliver the service. Ongoing education regarding hand hygiene, social distancing and self-isolation should be reinforced [14]. The development of a vaccine against COVID-19 is essential to prevent cancer patients from succumbing to this virus [15].

Declaration of Conflicts of Interest:
The authors declare no conflict of interest.

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