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RESEARCH ARTICLE

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Impact of the Covid-19 Pandemic on Oncology Consultations and Practical Management Recommendations

Oumayma Bounid*, Mariem Elanigri, Youness El-Khadir, Mouna Darfaoui, Issam Lalya, Abdelhamid El Omrani, Mouna Khouchani

Hematology and Oncology hospital, Radiation Oncology Department, Faculty of Medicine and Pharmacy, Cadi Ayyad University, Marrakech, Morocco

ABSTRACT

Background: The COVID-19 pandemic had an impact on the organization and access to cancer care, requiring the implementation of unusual management measures. Our study aims to assess the impact of the SARS-CoV-2 (COVID-19) pandemic on cancer outpatients within the oncology and haematology university hospital in Marrakech, in order to establish the best cancer care management strategies.

Materials and Methods: Cancer patients, who consulted during the month of April Since the start of national lockdown in Morocco following the COVID 19 pandemic, were invited to respond a questionnaire aimed at assessing the impact of this pandemic on their consultations. The characteristics of the consultants, their infectious status, the ease of access to the hospital, the type of consultation, with or without symptoms, the difficulties encountered, as well as the progress after deconfinement are the main items included in the questionnaire.

Results: 73 consultations were carried out in the oncological emergency room during the determined period with 76.71% of the responses, against 247 in April 2019. 57.14% consulted following the presence of symptoms to which the access was easy for 59.37% of 'between them and 46.87% could not go to the emergency room because of lockdown. 42.85% had a follow-up appointment, while 20.83% of these appointments were changed, and 29.16% of these patients have already missed it due to lack of transport and means. An increase in the number of consultants, advanced stages and positive COVID cases was marked after deconfinement.

Conclusion: During the COVID-19 pandemic, most consultations at the Marrakech oncology hospital were affected by the state of sanitary lockdown, hence the need for a mutual effort to deal with the fallout from this crisis.

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Background

The global pandemic of the novel coronavirus declared by WHO since March 11, 2020 has impacted all aspects of our lives around the world. In Morocco, the first confirmed case was reported on March 2, 2020, declaring on March 20, 2020 officially the country in compulsory sanitary lockdown to effectively fight against the national spread of the virus [1].

The current situation in Morocco, the consequences of sanitary lockdown and the second wave of contamination after de-confinement, represents a challenge for the oncology-haematology hospital (OHH) which takes care of cancer patients from southern Morocco, making the question of cancer care organization during the COVID-19 pandemic very crucial, especially with the few studies and research regarding preparedness plans for cancer patients during an infectious pandemic [2, 3].

It is well established that cancer patients are more susceptible to infections due to their immunosuppressed state caused by their disease and again by cancer treatments, with a statistically high risk of developing severe forms in COVID- disease19 and a significantly higher case fatality rate than non-cancer patients, hence the need to focus and assess the impact of this rapidly spreading viral infection on this category of patients [4, 5, 6].

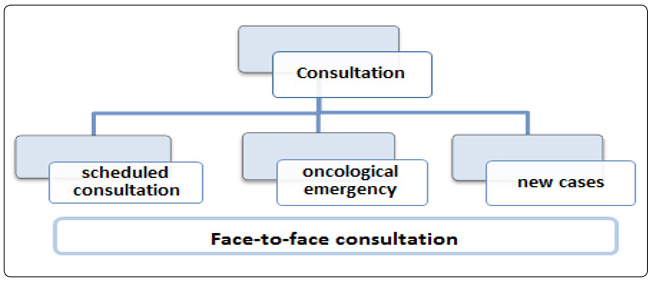
In this study, we specifically aim to assess the impact of the COVID-19 pandemic on the accessibility and organization of cancer outpatients in the oncology-haematology university hospital in Marrakech.

Contact Oumayma Bounid ✉ bounidoumayma@gmail.com Hematology and Oncology hospital, Radiation Oncology Department, Faculty of Medicine and Pharmacy, Cadi Ayyad University, Marrakech, Morocco.

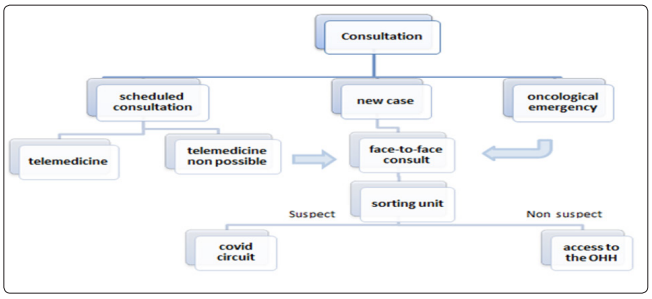
Materials and Methods

This is a descriptive study carried out during the month of April 2020 at the oncology-haematology university hospital in Marrakech, which assesses the impact of the Covid-19 pandemic and the state of lockdown on cancer outpatients, and their evolution after deconfinement.

1. Cancer outpatients organisation in the Oncology Haematology university Hospital in Marrakech:



2. Cancer outpatients service organization during the COVID pandemic:



3. Questionnaire :

We used a questionnaire mainly constituted of closed and multiple choice questions, in order to minimize the response time:

Consultation: to determine the type of urgent or scheduled consultation, patient referred or not, reason of consultation in the OHH at the time of Covid-19 pandemic, with or without symptoms such as fever, dyspnea , persistent pain, bleeding or others to be specified; describe the access to the OHH during this pandemic as being the same, easier or downright more difficult at the time of lockdown, reasons of missing their consultations appointment as well as their attitudes towards this situation. For follow-up patients, the means of consultation during the Covid-19 pandemic is important to specify whether it is by telemedicine consult or face-to-face consultation. Questions on the consultation progress, the time spent for each patient compared to previous consultations, the instructions to follow and the precautions to be observed were asked.

Evolution: evolution of each patient who consulted despite the Covid-19 pandemic or who missed his consultation because of the pandemic.

Patients were recruited by phone call after their OHH visits. Statistical analysis of closed responses used simple percentages. For scale questions, the responses distribution is calculated in numbers and percentages.

The ethical aspect was taken into consideration throughout our study. Participants were informed of the study objectives, while recalling that the survey was voluntary and anonymous.

Results

At the end of the determined period, we collected 56 responses out of the 73 files used (response rate: 76.71%).

The outpatients' number was 73 compared to 247 at the same period in 2019, or an activity reduction of 70.5%.

1) Demographic Characteristics

Patients ages ranged from 30 to 75 years (average age: 55.7 years); 47 were female (75.8%) and 15 were male (24.2%). Among 56 responses: 28.5% of patients live in Marrakech or around and 71.5% live outside of Marrakech.

2) Initial Diagnosis

The operation included all cancer locations, dominated by breast cancer. Among the 56 respondents, 41% are in a metastatic situation with a palliative therapeutic strategy for 19 of them. Patients on chemotherapy were the majority (Table 1).

Table 1: Ongoing treatment of consultants

TTT en cours	N	(%)
Chemotherapy	46	82,14
Radiation therapy	5	8,92
Hormone therapy	4	7,14
Targeted therapy	1	1,78
Monitoring or palliative care	0	0
Total	56	100

3) Covid-19 Status

During the consultation, all the patients declared never being in contact with confirmed positive case, 2 patients who had already a Covid-19 PCR with negative result, a patient with a scheduled appointment was tested positive and another in the emergency room.

4) Consultation

Emergency:

Among the consulting patients during the determined period, 57.14% have acute symptoms (table 2); while 42.85% have already a follow-up appointment.

Table 2: patients' symptoms in our series

Symptoms	N	(%)
Pain	23	71,87
Asthenia	4	12,5
Fever	2	6,25
Vomiting	1	3,12
Bleeding	1	3,12
Dyspnea	1	3,12
TOTAL	32	100

Among 32 patients with symptoms, 59.37% (19) judged having an easy access, while it was difficult for 40.62% (13) of them because of sorting measures. 46.87% declared that they could not visit emergency room because of the current pandemic either for lack of means, transport or fear of contamination, while waiting

until deconfinement or sometimes self-medicating or consulting by phone (table 3)

Table 3: impact of the pandemic on access to care

	N	(%)
Causes		
lack of means	20	62,5
lack of transport	8	25
fear of contamination	4	12,5
Attitudes		
waiting for deconfinement	25	78,12
self-medicating	2	6,25
consulting by phone	5	15,62
Total	32	100

Follow up Patients

Among the 42.85% patients followed, 20.83% had change their appointment because of the COVID-19 pandemic; 29.16% missed already a confirmed appointment either by lack of transport (100%) and by lack of means (25%).

All the interviewed patients were present at the OHH the day of their

Consultation

Dedicated time to each consultation was less than that of the previous consultations for 28.57% (16) of patients and the same for 71.42% (40) of them.

During their consultations, they all went through a sorting unit at the entrance to the OHH, respecting all preventive measures, and affirmed that in the consultation rooms, the doctor looks for symptoms that may be related with a Covid-19 infection, informs them of hygiene rules and the precautions to be taken, in particular hand washing, wearing masks, etc. and on the need and necessity of continuing and following their treatment despite the current situation.

5) Evolution:

The evolution after deconfinement was marked by a revival of consultations activity; resumption of cancelled appointments, increase of new cancer cases with more advanced disease stages as well as the detection of more cases tested positive for COVID-19, concomitant with a second epidemic wave (July-August) in Morocco.

Discussion

The rapid spread of the 2019 coronavirus disease (COVID-19) presents a big challenge in Morocco. Health professionals at the oncology and haematology university hospital, who are fighting this new crisis, are facing the difficult question of how to manage medical consultations for cancer patients at the time of confinement, while reducing the high risk of human-to-human transmission and maintaining the continuity of therapeutic protocols.

This study was carried out as part of the necessary transition for the provision of care in a tertiary care establishment, which has the particularity of caring for a very vulnerable category of patients. It was carried out over a period of one month, assessing the impact of the Covid-19 pandemic and the state of national lockdown on cancer patients consultations at the OHH of Marrakech.

By analyzing the different results, the number and flow of consultants patient was significantly lower than that of 2019 for the same period (April), this is due to the various difficulties encountered in particular the lack of transport or means as well as the fear of being contaminated by the virus within the hospital.

Our results confirm those of a questionnaire examining the effect of the SARS 2004 pandemic on outpatients, intended for patients with non-small cell lung cancer (NSCLC), which showed that nearly two-thirds of patients (63.8%) were afraid to go to hospital for fear of contracting SARS, and three of them stopped all chemotherapy for the same reason.[2, 7]

The confinement may have reduced the number of hospital visits and repeated appointments with a decrease of outpatients, and consequently the care continuity [8, 9, 10]. Tumor progression and the onset of serious complications are therefore the major concerns, and this decision whether or not to postpone cancer treatment must be made on case-by-case basis, depending on the risk for each patient [11, 12].

In the absence of studies evaluating the impact of this pandemic on the cancer outpatients, cancer societies, national and international organizations have developed this question. they published guidance documents and recommendations likely to ensure consistency of care in this time of crisis, in particular ESMO, ASTRO and ESTRO…, but also a new online resource by ASCO; especially with the gradual increase of new cases number of COVID-19 and the constraints of health systems moderate resources, towards an approach of prioritizing beneficial treatments with curative purposes or a high probability of effectiveness [13, 14].

In China, a national analysis of the risk of COVID-19 in cancer patients found they have a higher risk than individuals without cancer, and proposed an intentional postponement of elective treatment of stable cases, an intensification of strict protective measures for cancer patients and more intensive monitoring and treatment of positive cases, as the three major strategies to be adopted [5, 15]. Reducing the cancer patients hospital visits, as well as establishing appropriate isolation protocols for patients in need of treatment, during any viral epidemic or pandemic in the future is recommended [16].

In Italy as in Spain, the approach was to suspend outpatients, to prohibit hospital visits of any symptomatic patient, to set up access control points to assess the presence of symptoms and to provide each patient with mask before entering, to deny visitors or attendants access, and to consider telemedicine as the alternative that can minimize exposure and contact when possible, in order to make monitoring more secure, despite the limited availability of telecommunications infrastructure needed to implement this strategy [17, 18].

Also, Alexander and al, in the USA, find that tele-health offers an opportunity to minimize the negative effect of the pandemic on health workers who are directly involved in the diagnosis, treatment and follow-up of cancer patients, that aim to balance delay in cancer diagnosis or treatment against the risk of COVID attack, mitigate the risks of care disruption and complications associated with distancing and lockdown measures, and manage limited health resources in this period of new crisis [19].

Another example of the management of oncology departments during the COVID pandemic is that presented by Ueda et al. It involves screening patients, educating them and their families using documents and even websites, while reinforcing the "stay at home" policy [20]. Telemedicine also plays an important role in their strategy, developed by accelerated doctors training according to the evolution of regulations, as well as the reservation of emergency services and hospital capacities for those who absolutely need to [21].

So far, the evidence justifying an anticancer treatment cessation during this viral pandemic is very limited [13], still questioning the risk of exposure of cancer patients in hospitals, especially in the presence of co-morbidities or advanced age [22].

In oncology department, as being a crucial service in a university hospital, some practices change, depends on each situation, must be considered, balancing between the danger of delaying cancer treatment and the advantage of reducing the risk of COVID-19 infection [3].

Several recommendations proposed in this direction in several studies, to ensure this continuity of care, can be implemented:

A strict policy of patients screening and sorting using a reserved entrance, in a dedicated area, by careful questioning with temperature measurement [23, 24]

Limited Access to one person without accompanying, unless necessary.

A phone preselection can be carried out before each next visit, in search of suggestive symptoms, possible exposure or contact with confirmed cases ... [25]. Any patient with fever or meeting the criteria for suspicion should be referred to an isolated circuit for subsequent management [9].

Wearing masks is mandatory, in addition to hands rubbing with a hydro-alcoholic solution, available at the entrance. The use of a mat soaked in disinfectant solution at the front door and clear education messages promoting hand washing and respiratory hygiene.

Respecting social distancing before entering hospital and in waiting rooms; floor marking from a distance of at least 1 metre and the use of every other seat Cancer patients, showing no suggestive symptoms of COVID-19, should continue their treatment while reducing their recurrent hospital admissions [23, 26, 27].

Regular follow-up can be maintained by telemedicine programs allowing a transition from personal visits to regular meetings by phone, e-text, email or smartphone apps, whenever possible and feasible, while living in the age of technology and social media [25, 28, 29].

Tele-oncology has demonstrated its effectiveness at a lower cost. It facilitates access to cancer care and management by offering remote chemotherapy supervision, possible symptoms and palliative care management, and psychological support [30]. It even helps reduce the use of personal protective equipment.

There are practical limits to this strategy. Some areas limited access to Internet, unstable connection, and lack of patients' education. Otherwise, staff training on telemedicine tools which is limited in this current context and the impossibility of performing an appropriate clinical examination from a far [31].

The postponed visits should be rescheduled to prevent lost to follow-up patients.

New patients consultations should generally be maintained so as not to delay treatment [32].

The management of therapeutic strategies prioritization of cancer patients must take into account the curative or non-curative aim of treatment, age, life expectancy and especially the presence or not of symptoms [14, 33].

Considering therapeutic schedules that can reduce the number of admissions to the oncology hospital, and increasing the biochemical and radiological markers control interval.

Switching to oral treatment as soon as possible and available or even treatment breaks for patients with palliative treatment [25].

The use of hematopoietic stimulating factors; outside some protocols; to prevent chemotherapy-induced neutropenia during a pandemic is not recommended by any evidence [2].

Radiation therapy puts a unique challenge during this pandemic; patients undergoing radiotherapy or with urgent indication must attend treatment daily without interrupting, with all necessary precautions [2].

Screening of outpatient units, chemotherapy units and health workers, in order to identify potential positive cases and manage them without risking the disease transmission.

Conclusion

Our study bring up one of the major topics concerning the management of cancer patients during the COVID-19 pandemic, by showing its impact on their consultations, whether for a follow-up or in the presence of symptoms requiring urgent care in within our hospital. With a higher risk of COVID-19 infection than individuals without cancer, this study has shown a significant reduction in the number of follow-up patients during the current pandemic.

The medical visits and consultations reduction, outpatients elective admissions according the state of emergency and the use of follow-up telemedicine are recommendations that can help minimizing the risk of viral exposure and therefore a possible transmission, to establish a better management strategy for cancer patients during the COVID-19 pandemic, and which probably may be applicable to various infectious pandemics.

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