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COVID-19 impact and predictive factors for mortality in cancer patients

E. Saiz García1, P. Peinado1, I. Moreno1, M. Dorta1, B. Alzave1, R. Alvarez Gallego1, R. Madurga1, J. Rodriguez Pascual1, L. Ugidos1, C. Muñoz1, E. García-Rico1, A. Cubillo1

1Medical Oncology Department, Hospital Madrid Norte Sanchinarro - Centro Integral Oncológico Clara Campal, Madrid, Spain; 2Radiation Oncology Department, Hospital Madrid Norte Sanchinarro - Centro Integral Oncología Clara Campal, Madrid, Spain; 3Fundación Investigación HM Hospitales, HM Hospitales, Madrid, Spain

Background: SARS-CoV-2 is a novel coronavirus that has been responsible for the largest pandemic in the last century: COVID-19. This disease has widely affected Spain with a high lethality in ancient patients (pts) and with comorbidities. Oncological pts were not an exception.

Methods: We evaluated the association between COVID-19 mortality and clinical/laboratory/radiological parameters in cancer pts from March to April 2020 at our institution. Past medical history and COVID-19-related parameters (symptoms, laboratory/radiological parameters in cancer pts from March to April 2020 at our institution. Past medical history and COVID-19-related parameters (symptoms, laboratory/radiological parameters) were retrospectively collected. Univariate analysis (UA) has been done using Fisher exact and U-Mann-Whitney test for qualitative and quantitative variables, respectively. Multivariant analysis (MA) has been done using logistic regression.

Results: Forty three hospitalized pts were diagnosed with COVID-19: 30 pts (69.8%) were symptomatic on admission and 13 pts (30.2%) were hospital-acquired cases. Out of 34 pts (79.1%) SARS-CoV-2 PCR was positive. Some clinical and laboratory parameters were found to be predictive factors for mortality as previously reported in non-cancer pts. Further investigations with larger number of pts are needed.

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Lessons from a pandemic: An audit of acute medical oncology admissions during SARS-CoV-2 outbreak

A. Ni Choininá1, M. Allen1, L. Miliewski1, D.G. Power1, R.M. Connolly1, D. Collins1, S. O’Reilly1, R. Bambury2

1Department of Medical Oncology, CUH – Cork University Hospital, Cork, Ireland; 2Cancer Research@UCC, University College Cork, Cork, MD, Ireland

Background: In December 2019 a cluster of pneumonias, later identified as SARS-CoV-2 CoV), were reported in China. The World Health Organisation declared CoV a pandemic March 11th. Lockdown measures were implemented in Ireland March 27th. Cork University Hospital is a large acute hospital and a tertiary referral centre for cancer care. We undertook an audit of unscheduled medical oncology admissions over a 3 month period with a view to assess the impact of CoV on the centre.

Methods: From 1st February to 30th April we audited unscheduled medical oncology admissions. Parameters included presenting time, location and complaint, CoV status and average length of hospital stay (aLOS). Data was organised into 3 phases: four week period prior to a confirmed case of CoV in Ireland (phase I), four week period from confirmed case to lockdown implementation (phase 2) and four week period during lockdown (phase 3). After the outbreak of CoV we developed a separate medical oncology assessment facility (AOS) with an admission pathway. A hospital CoV pathway (CoVp) for potential CoV cases was also implemented.

Results: A total of 162 medical oncology patients had unscheduled admissions during this period. Over half (57%) were receiving anticancer systemic treatment. The most common presenting complaints were pain (21%), pyrexia (17%) and dyspnoea (14%). The underlying diagnosis was cancer-related in 51%, treatment-related toxicity in 10% and non-cancer related in 39%. One patient was CoV positive. Unscheduled hospital admissions, source of admission and aLOS are outlined in the Table.

Table: Learnings from a pandemic: An audit of acute medical oncology admissions during SARS-CoV-2 outbreak

| Phase | Total | ED | Outpatient | AOS | CoVp | Other |
|-------|-------|----|------------|-----|------|-------|
| phase I | 67 | 52 | 7 | 6 | 0 | 3 | 15 |
| phase II | 37 | 20 | 54 | 1 | 10 | 4 | 2 | 5 | 5 |
| phase III | 58 | 27 | 47% | 4 | 16 | 4 | 6 | 3 | 3 |

Conclusions: A reduction in aLOS and ED admissions was paralleled by increasing use of alternative pathways. Processes which facilitate urgent assessment of oncology patients in specialized units avoid ED attendance and discharge planning in the care of cancer patients in the face of a pandemic and beyond.

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Clinical course and outcome of COVID-19 in cancer patients: Early results from the “onCOVID-19” study

V. Di Noia, M. Squadrini, R. Barile, A. D’Aveni, A. Liguori, F. Brena, S. Dalto, D. Di Cintio, M.G. Sauta, G.L. Ceresoli, P. Salvini, G.D. Beretta

Medical Oncology, Humanitas Gavazzeni, Bergamo, Italy

Background: Cancer patients are considered at higher risk of SARS-CoV-2 infection and more serious COVID-19 illness compared to the general population. We present the early results of the “onCOVID-19” study exploring the clinical course and outcomes of SARS-CoV-2 infection in patients affected by cancer.

Methods: In this observational study, we collected clinical data from patients referred to our institution with histologically confirmed diagnosis of solid cancer and COVID-19 from Feb 1 to May 20, 2020. COVID-19 diagnosis was laboratory or radiologically confirmed or clinically suspected for suggestive symptoms, including fever (>37.5°C) and/or respiratory tract symptoms. Univariate and multivariate analyses were performed to explore the risk factors associated with severe events defined as hospitalisation, admission to an intensive care unit, mechanical ventilation or death.

Results: Of the 64 patients included, 35 had available clinical data on medical and cancer history required for the analysis. Median age was 63 (47-86) years. Male were 22 (63%) and current or former smokers were 25 (76%). Lung was the most frequent site of primary tumor (15, 43%) or metastases (13, 37%). Out 26 (74%) patients on active anti-tumor treatment, 6 (23%) received immune checkpoint inhibitors (ICI). Most common symptoms were fever (40%), shortness of breath (34%) and cough (23%); lymphopenia (<1000/mm3) was found in 5/15 (33%) tested patients. The diagnosis of COVID-19 was only clinically suspected in 2 (6%) cases and confirmed by RT-PCR or imaging (ground glass opacity and/or patchy consolidation) in 11 (31%) and 31 (88%) patients, respectively. An antimicrobial treatment was administered in 19 patients. Eleven (31%) patients had severe events, death occurred in 7 (20%) cases. Higher risk for developing severe events was associated with active treatment with ICI (RR 4.0, 95%CI 1.8-9.9, p=0.007) and lymphopenia (RR 4.0, 95%CI 1.1-14, p=0.007).

Conclusions: We confirmed the vulnerability of cancer patients to COVID-19. Although the sample size was small, treatment with ICI and lymphopenia seem to be risk factors for death and severe events. Screening cancer patients for infection is advisable, in particular before starting immunotherapy or in case of lymphopenia.

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Impact of COVID-19 on unscheduled admissions of medical oncology patients during SARS-CoV-2 outbreak

Reilly1, R. Bambury2

1Cancer Research@UCC, University College Cork, Cork, MD, Ireland

Background: In December 2019 a cluster of pneumonias, later identified as SARS-CoV-2 (CoV), were reported in China. The World Health Organisation declared CoV a pandemic March 11th. Lockdown measures were implemented in Ireland March 27th. Cork University Hospital is a large acute hospital and a tertiary referral center for cancer care. We undertook an audit of unscheduled medical oncology admissions over a 3 month period with a view to assess the impact of CoV on the centre.

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Results: A total of 162 medical oncology patients had unscheduled admissions during this period. Over half (57%) were receiving anticancer systemic treatment. The most common presenting complaints were pain (21%), pyrexia (17%) and dyspnoea (14%). The underlying diagnosis was cancer-related in 51%, treatment-related toxicity in 10% and non-cancer related in 39%. One patient was CoV positive. Unscheduled hospital admissions, source of admission and aLOS are outlined in the Table.

Table: Impact of COVID-19 on unscheduled admissions of medical oncology patients during SARS-CoV-2 outbreak

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| phase II | 37 | 20 | 54 | 1 | 10 | 4 | 2 | 5 | 5 |
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Conclusions: A reduction in aLOS and ED admissions was paralleled by increasing use of alternative pathways. Processes which facilitate urgent assessment of oncology patients in specialized units avoid ED attendance and discharge planning in the care of cancer patients in the face of a pandemic and beyond.

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