



Frequency and Intensity of Psychological and Spiritual Distress in Advanced Cancer Patients seen in a Supportive Care Center During COVID-19 Pandemic

Joannis Baez Gonzalez, Marvin Omar Delgado Guay, Diana Gutierrez, Bryan Fellman, Maxime de la Cruz, David Hui and Eduardo Bruera.

Department of Palliative, Rehabilitation and Integrative Medicine, The university of Texas MD Anderson Cancer Center

Introduction

The novel human coronavirus disease (COVID-19) is a highly transmissible viral infection caused by a zoonotic novel coronavirus named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). It was first reported in December 2019 in Wuhan, China, and, not long after, spread worldwide.

During the COVID-19 pandemic, patients with cancer have been considered a highly vulnerable group, with an increased risk of contracting the virus and developing severe complications from this infection as they are typically of advanced frail age with multiple comorbidities and with increased risk of immunosuppression from underlying malignancy and from associated cancer treatment and increased mortality.

As the coronavirus emergency evolved and barriers continued to emerge, psychological consequences in the general population grew higher with new challenges- social isolation, unemployment, and home loss, among others. Introducing new stressors became an extra burden for patients with cancer who were already facing cancer-related stress, worsening their mental health.

There are limited studies in the palliative care setting regarding the psychological and spiritual distress in advanced cancer patients, especially amid the COVID-19 pandemic.

Objectives

To determine the frequency and intensity of psychological Distress (Anxiety and Depression) and Spiritual Distress (Spiritual Pain) in advanced cancer patients evaluated in the Supportive Care Center during the pre-COVID-19 pandemic time and during the COVID-19 pandemic.

Methods

Study Design

- Retrospective descriptive study.

- Sample Size: 2495 patients.

- Symptom profiles obtained from the day of the visit to our Supportive Care Center were collected by using the Edmonton symptom assessment scale-FS (ESAS-FS).

Eligibility

- Patients above 18 years of age.
- Disease category: All types of Cancer
- Patients seen at MD Anderson Cancer Center Supportive Care Clinic from May to December 2019 and from May to December 2020.

Data Collection

- Baseline demographics: Age, sex, performance status (ECOG), cancer diagnosis and stage, marital status, ethnicity, religion.
- Edmonton symptom assessment scale-FS (ESAS-FS).

Statistical Analysis

- Descriptive statistics for baseline characteristics of the study population pre- and post-COVID-19.
- Comparisons were made by cohort using a 2-sample t-test, Wilcoxon rank-sum test, chi-squared test, or Fisher's exact test, depending on the underlying distribution of the data.
- Multivariable Analysis of predictors of psychological Psychosocial distress and Spiritual pain.

Results

Table 1. Baseline Characteristics

| Characteristic | Pre-COVID Pandemic (n = 1214) | | During COVID pandemic (n = 1283) | | P-value |
|-------------------------------|-------------------------------|----------|----------------------------------|---------|---------|
| | N | % | N | % | |
| Media age (min- max) | 64 | (20-101) | 62 | (21-97) | 0.010 |
| Female gender | 662 | 54.53 | 716 | 55.89 | 0.494 |
| Race | | | | | 0.048 |
| Other | 347 | 28.80 | 324 | 25.27 | |
| White or Caucasian | 858 | 71.20 | 958 | 74.73 | |
| Ethnicity | | | | | 0.021 |
| Hispanic or Latino | 159 | 13.34 | 210 | 16.68 | |
| Marital Status | | | | | 0.663 |
| Divorced | 113 | 9.32 | 124 | 9.69 | |
| Legally Separated | 11 | 0.91 | 14 | 1.09 | |
| Married | 848 | 69.97 | 876 | 68.44 | |
| Other | 2 | 0.17 | 6 | 0.47 | |
| Significant Other | 16 | 1.32 | 20 | 1.56 | |
| Single | 145 | 11.96 | 143 | 11.17 | |
| Widowed | 77 | 6.35 | 97 | 7.58 | |
| Stage | | | | | 0.651 |
| Local/Recurrent | 322 | 26.52 | 355 | 27.73 | |
| Metastatic | 864 | 71.17 | 891 | 69.61 | |
| No evidence of active disease | 28 | 2.31 | 34 | 2.66 | |

Table 2. Intensity of Symptoms Distress of Patients living with Cancer before and during COVID-19 Pandemic.

| ESAS-FS Symptoms | Pre-COVID Pandemic (n = 1214) | | During COVID pandemic (n = 1283) | | p-value |
|-----------------------|-------------------------------|--|----------------------------------|--|---------|
| | Median (Min - Max) | | Median (Min - Max) | | |
| Pain | | | | | <0.001 |
| N | 1198 | | 1267 | | |
| 5.00 (0.00 - 10.00) | | | 4.00 (0.00 - 10.00) | | |
| Fatigue | | | | | <0.001 |
| N | 1200 | | 1268 | | |
| 6.00 (0.00 - 10.00) | | | 5.00 (0.00 - 10.00) | | |
| Nausea | | | | | 0.045 |
| N | 1195 | | 1267 | | |
| 0.00 (0.00 - 10.00) | | | 0.00 (0.00 - 10.00) | | |
| Depression | | | | | 0.103 |
| N | 1195 | | 1262 | | |
| 1.00 (0.00 - 10.00) | | | 1.00 (0.00 - 10.00) | | |
| Anxiety | | | | | 0.992 |
| N | 1197 | | 1263 | | |
| 2.00 (0.00 - 10.00) | | | 3.00 (0.00 - 10.00) | | |
| Drowsiness | | | | | 0.061 |
| N | 1199 | | 1266 | | |
| 3.00 (0.00 - 10.00) | | | 2.00 (0.00 - 10.00) | | |
| Appetite | | | | | <0.001 |
| N | 1199 | | 1266 | | |
| 5.00 (0.00 - 10.00) | | | 4.00 (0.00 - 10.00) | | |
| Shortness of Breath | | | | | <0.001 |
| N | 1196 | | 1267 | | |
| 1.00 (0.00 - 10.00) | | | 0.00 (0.00 - 10.00) | | |
| Wellbeing | | | | | <0.001 |
| N | 1191 | | 1262 | | |
| 5.00 (0.00 - 10.00) | | | 4.00 (0.00 - 10.00) | | |
| Sleep Problem | | | | | <0.001 |
| N | 1197 | | 1266 | | |
| 5.00 (0.00 - 10.00) | | | 5.00 (0.00 - 10.00) | | |
| Financial Distress | | | | | <0.001 |
| N | 1196 | | 1265 | | |
| 1.00 (0.00 - 10.00) | | | 0.00 (0.00 - 10.00) | | |
| Spiritual Pain | | | | | <0.001 |
| N | 1194 | | 1264 | | |
| 0.00 (0.00 - 10.00) | | | 0.00 (0.00 - 10.00) | | |
| Total ESAS-FS | | | | | <0.001 |
| N | 1167 | | 1237 | | |
| 39.00 (0.00 - 105.00) | | | 34.00 (0.00 - 113.00) | | |

Table 3. Frequency of Symptoms Distress in Patients living with Cancer before and during the COVID-19 Pandemic.

| ESAS Symptoms (≥ 1/10) | Pre-COVID Pandemic (n = 1214) | | During COVID pandemic (n = 1283) | | p-value |
|------------------------|-------------------------------|-------|----------------------------------|-------|---------|
| | N | % | N | % | |
| Pain | | | | | 0.015 |
| ≥ 1 | 1042 | 86.98 | 1058 | 83.50 | |
| Fatigue | | | | | 0.114 |
| ≥ 1 | 1119 | 93.25 | 1161 | 91.56 | |
| Nausea | | | | | 0.604 |
| ≥ 1 | 568 | 47.53 | 589 | 46.49 | |
| Depression | | | | | 0.062 |
| ≥ 1 | 683 | 57.15 | 674 | 53.41 | |
| Anxiety | | | | | 0.864 |
| ≥ 1 | 796 | 66.50 | 844 | 66.83 | |
| Drowsiness | | | | | 0.644 |
| ≥ 1 | 791 | 65.97 | 824 | 65.09 | |
| Appetite | | | | | 0.017 |
| ≥ 1 | 996 | 83.07 | 1004 | 79.30 | |
| Shortness of Breath | | | | | <0.001 |
| ≥ 1 | 632 | 52.84 | 560 | 44.20 | |
| Wellbeing | | | | | 0.003 |
| ≥ 1 | 1058 | 88.83 | 1070 | 84.79 | |
| Sleep Problems | | | | | <0.001 |
| ≥ 1 | 1087 | 90.81 | 1082 | 85.47 | |
| Financial distress | | | | | <0.001 |
| ≥ 1 | 647 | 54.10 | 479 | 37.87 | |
| Spiritual Pain | | | | | <0.001 |
| ≥ 1 | 366 | 30.65 | 284 | 22.47 | |

Table 4. Clinical characteristics of COVID cohort by level of Psycho-Spiritual Distress

| ESAS - PS* | No | | Yes | | p-value** |
|----------------------|--------------------|--|------------------------|--|-----------|
| | Median (Min - Max) | | Median (Min - Max) | | |
| Pain | | | | | <0.001 |
| N | 1053 | | 201 | | |
| 4.00 (0.00 - 10.00) | | | 5.00 (0.00 - 10.00) | | |
| Fatigue | | | | | <0.001 |
| N | 1053 | | 201 | | |
| 5.00 (0.00 - 10.00) | | | 7.00 (0.00 - 10.00) | | |
| Nausea | | | | | <0.001 |
| N | 1052 | | 201 | | |
| 0.00 (0.00 - 10.00) | | | 2.00 (0.00 - 10.00) | | |
| Depression | | | | | <0.001 |
| N | 1054 | | 201 | | |
| 0.00 (0.00 - 10.00) | | | 5.00 (2.00 - 10.00) | | |
| Anxiety | | | | | <0.001 |
| N | 1054 | | 201 | | |
| 2.00 (0.00 - 10.00) | | | 5.00 (2.00 - 10.00) | | |
| Drowsiness | | | | | <0.001 |
| N | 1054 | | 200 | | |
| 2.00 (0.00 - 10.00) | | | 4.00 (0.00 - 10.00) | | |
| Appetite | | | | | <0.001 |
| N | 1051 | | 201 | | |
| 4.00 (0.00 - 10.00) | | | 5.00 (0.00 - 10.00) | | |
| Shortness of Breath | | | | | <0.001 |
| N | 1053 | | 200 | | |
| 0.00 (0.00 - 10.00) | | | 2.00 (0.00 - 10.00) | | |
| Wellbeing | | | | | <0.001 |
| N | 1051 | | 199 | | |
| 3.00 (0.00 - 10.00) | | | 5.00 (0.00 - 10.00) | | |
| Sleep Problem | | | | | <0.001 |
| N | 1053 | | 200 | | |
| 4.00 (0.00 - 10.00) | | | 6.00 (0.00 - 10.00) | | |
| Financial Distress | | | | | <0.001 |
| N | 1052 | | 201 | | |
| 0.00 (0.00 - 10.00) | | | 4.00 (0.00 - 10.00) | | |
| Spiritual Pain | | | | | <0.001 |
| N | 1054 | | 201 | | |
| 0.00 (0.00 - 9.00) | | | 3.00 (1.00 - 10.00) | | |
| Total ESAS-FS | | | | | <0.001 |
| N | 1040 | | 197 | | |
| 31.00 (0.00 - 92.00) | | | 56.00 (23.00 - 113.00) | | |

Table 5. Multivariable Analysis of Predictors of Psychosocial and Spiritual Distress

| Symptom | Characteristic | OR | 95% LB | 95% UB | p-value |
|-----------------------|--|------|--------|--------|---------|
| Psychosocial distress | AGE | 0.99 | 0.98 | 1.00 | 0.286 |
| | CAGE AID | 0.98 | 0.83 | 1.16 | 0.803 |
| | ESAS Financial Distress | 1.21 | 1.16 | 1.27 | <0.001 |
| | ESAS Pain | 1.00 | 0.95 | 1.05 | 0.908 |
| | ESAS Wellbeing | 1.00 | 0.94 | 1.06 | 0.988 |
| | Not Hispanic or Latino (ref: Hispanic) | 1.13 | 0.74 | 1.72 | 0.569 |
| | ESAS Anxiety | 1.14 | 1.07 | 1.21 | <0.001 |
| | ESAS Depression | 1.30 | 1.22 | 1.39 | <0.001 |
| | Telephone/Video Visit (ref: Consult) | 0.63 | 0.33 | 1.19 | 0.152 |
| | pre COVID (ref: COVID) | 1.40 | 0.78 | 2.49 | 0.260 |
| Spiritual Pain | AGE | 1.00 | 0.99 | 1.01 | 0.546 |
| | CAGE AID | 1.04 | 0.90 | 1.20 | 0.594 |
| | ESAS Financial Distress | 1.24 | 1.20 | 1.29 | <0.001 |
| | ESAS Pain | 0.98 | 0.94 | 1.02 | 0.398 |
| | ESAS Wellbeing | 1.04 | 0.99 | 1.10 | 0.108 |
| | Not Hispanic or Latino (ref: Hispanic) | 1.09 | 0.77 | 1.54 | 0.636 |
| | ESAS Anxiety | 1.04 | 0.99 | 1.10 | 0.148 |
| | ESAS Depression | 1.16 | 1.10 | 1.23 | <0.001 |
| | Telephone/Video Visit (ref: Consult) | 0.49 | 0.30 | 0.80 | 0.005 |
| | pre COVID (ref: COVID) | 1.10 | 0.71 | 1.71 | 0.675 |

Conclusions

- We found that among patients with advanced cancer referred to the supportive cancer center; physical, psychological, and spiritual distress were frequent and severe, and there was not significant increase associated with the pandemic period. In fact, they were similar or lower during the pandemic as compared to before the pandemic.
- In both periods financial distress was independently associated with psychological and spiritual severity.
- Involvement of the interdisciplinary teams, including chaplaincy is needed.

References

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