

What could be Improved at Melanoma Patients' Welfare Death? End of Life Perception of Caregivers

Fernanda Cardoso Parreiras¹, Ana Paula Drummond-Lage¹, Marina Patrus Ananias de Souza Brandão¹, Laura Nogueira Silva¹, Lara Salvador Geo¹, Brenda Bhering Andrade¹, Andreia Cristina de Melo² and Alberto Julius Alves Wainstein^{1*}

¹Medical Science Minas Gerais (CMMG), Belo Horizonte, Brazil

²National Cancer Institute (INCA), Rio de Janeiro, Brazil

Correspondence should be addressed to Alberto Julius Alves Wainstein, Medical Science Minas Gerais (CMMG), Rua Curitiba 2550, ap 1902, Belo Horizonte, 30170-122, Brazil

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ABSTRACT

Despite enormous recent advances in stage IV melanoma treatment, it continues to have a significant mortality. Five-years survival is below 50% even when granted full access to effective therapeutic regimens. Considering the real world, mostly with low or medium-income countries like Brazil, where 75% of population depends on public health system receiving ineffective Dacarbazine chemotherapy, more than 95% of stage IV patients are dead before 5 years. Knowing the survival process of melanoma end-of-life time is imperative to help physicians to establish better symptoms control and improve the quality of death of these patients. Methods: Relative caregiver of melanoma end of life patients were invited to participate in a specific interview answering questions for the purpose of gathering information regarding symptoms and patients' complaints at the last 30 days, 7 days and at the day of death. Results: Although melanoma has a highest propensity for brain dissemination, seizure and focal neurological deficits were not a major complaint. Most of dying melanoma symptoms are shared among other solid terminality tumor process and get worse from 30 days to 7 days, but the majority of symptoms kept unchanged from 7 days till time to death. Wound bleeding and bad odor were the only complaints that got worse during the whole terminality process and could be improved with better commitment of assistant team. Conclusions: although a strong effort is made to control brain metastasis, local and regional open wound metastasis represents a major remediable complaint that should receive more attention at end-of-life melanoma patients.

KEYWORDS

Melanoma; End-of-life; Terminality; Palliative care; Symptoms; Caregivers

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INTRODUCTION

The incidence of melanoma has steadily increased over several decades accounting for less than 5% of all skin cancers but is responsible for most of 85% skin cancer-related deaths. Even patients diagnosed at an early-stage IA to IIC without lymph node disease, can have recurrence dropping 10-years melanoma specific survival from 98% to 75% respectively, according to AJCC 8th Edition, 2018 [1].

From an orphan disease with no effective treatment in the early 21st century to a model of effective cancer treatment reflecting the introduction of novel and more effective therapeutic regimens, including the two cornerstones of melanoma therapy: immunotherapies and targeted therapies that dramatically improved prognosis, disease-free survival, and even overall survival. Despite these advances, at the end, the vast majority of advanced melanoma patients will progress to death. There are 100 articles published on melanoma treatment for each article published on melanoma palliative care. Nevertheless, most of palliative care melanoma papers include supportive care with therapeutically drugs at the last 30 days of life what could be considered malpractice [2-4].

The complexity of the symptomatology presented by cancer patients is known, but little is understood about the final moments of melanoma patients [5]. Among the symptoms presented by general cancer patients, pain, dyspnea, and depression are more prevalent and shared by melanoma patients. Also, bleeding or exudate represents characteristic symptoms for patients with skin cancer and results in considerable quality of life deterioration in these patients. The prevalence of these symptoms may vary at different time periods before death and require differentiated care from health professionals and the family, who are often the primary answerable for patient care [5,6].

We must also consider the place where these deaths occurred showing that over 70% of these patients die in a hospital environment, intensive care units, and a few proportions receive palliative or supportive care [7].

Patients' needs estimated by the caregiver's perceptions at end of life should be better understood and considered to optimize the patient's quality of life. Often, they are the only link between the patient's debilitating illness and the health team [8-10].

This study was designed to investigate the symptoms preceding advanced melanoma's end of life affecting their dignity before death. We analyzed the sequence of events from the 30 days previous to death of melanoma to identify relevant factors that impact their life according to 1st degree relative caregivers' perception.

METHODS

This study assessed, retrospectively, melanoma patients who attended a Brazilian Melanoma Reference Service with the primary goal to identify patients that evolved to death because of melanoma in one year. Just relative caregivers directed involved at the terminality patients care were contacted and invited to a personal interview regarding the last 30 days of their relatives' lives because they could express better personal and emotional feeling not related to a paying care job. Institutional Review Board (IRB) approved the study, and all caregivers signed an Inform Consent Form (ICF).

We developed a specific yes or no survey with 30 questions to measure end life symptoms regarding three different moments: 30 days and 7 days before death and at the day of death. The first-degree family caregiver answered it alone with unlimited time. They had a dedicated researcher assistance to help and provide psychological support according to IRB recommendation. We also collected variables including tumor staging at the diagnosis, socio

demographic and epidemiological profile, religious conviction, and treatments received.

We used for the descriptive analysis of the qualitative variables, the absolute and relative frequencies, and while in the description of the quantitative variables measures of position, we used central tendency and dispersion. The Kaplan-Meier curve was used to evaluate the patient's survival time, while the Log-Rank test was used to compare the survival curves with the histological type. The software used in the analysis was R (version 3.3.1).

RESULTS

Melanoma Patients

In this sample, 66 deaths from melanoma were conclusively confirmed, excluding cases in which other comorbidities influenced the outcome.

The majority of patients were male (59.4%), Catholic (71.9%), and died in a hospital setting (84.4%). These characteristics did not influence the patients' dead symptoms. At initial diagnosis, patients had a mean age of 53.0 years old (25 years to 81 years), and the mean age at death was 58.8 years (39 years to 86 years). The most common histological subtype was superficial spreading (40.6%), followed by nodular (25%). The mean overall survival since diagnosis was 5.75 years.

The mean number of treatments to which the patients were submitted was three (1 to 5). All patients underwent surgical procedures, and most of them (78.1%) received chemotherapy. Minority received immunotherapy (40.6%) or target drugs (9.4%), mainly because of lack of access to these treatments at Brazilian Public Health System.

All patients died of stage IV melanoma, and 25% presented brain metastasis, and 37.5% had two or more metastases' sites.

From the 66 eligible medical charts, only 32 relative's caregivers who closely followed the patient and their needs in the last 30 days to the end of life agreed to participate in the study, mainly because they did not want to evoke painful periods. These caregivers included first-degree relatives, mainly spouses (34.4%), siblings (28.1%), and children (21.9%).

According to caregivers, the most prevalent symptoms presented by patients 30 days before death and persistent until the final moments were weight loss (68.7%), nausea and vomiting (65.6%), and loss of appetite (65.6%). Because of malnutrition, 28.3% of patients used tubes for nutrition, and more than 50% of them complain of pain associated with this alternative nutrition route. (Table 1).

Also, 50% of the patients felt pain in the month before death, which increased progressively close to death day. However, 34.4% did not present pain at any time. According to caregivers' pain was the symptom that most concerned patients. The most common pain site was the lower limb in 21.9%, including 43.8% of the individuals' required specialized pain treatment service.

Dyspnea was more prevalent at the week before death in 53.1% of the patients, while only 21.9% presented this symptom one month before death. Another 37.5% did not have this symptom at any time (Table 1).

Depression affected 53.1% of patients 30 days before death and 59.3% in the previous week, with 43.7% had prescribed antidepressants.

Only 18.7% of caregivers described wound bleeding 30 days before death, but this symptom increases to 34.4% on the day of death (Table 1).

Limitations on walking and personal hygiene at 30 days before death was present for 62.5% of the patients, which increased to 93.7% a week before death (Table 1).

It was not surprising that 75% of caregivers reported the hospital as the most appropriate place for a patient's death.

Symptoms and Complaints	Time				
	One Month before Death	One Week before Death	Day of Death	Not Reported Anytime	Not Rated or Not Available
Depression	53.0%	59.40%	59.40%	37.50%	3.10%
Diarrhea	12.50%	18.70%	21.90%	75.00%	3.10%
Dyspnea	21.90%	53.10%	56.20%	37.50%	6.30%
Inapetence	65.60%	71.90%	71.90%	28.10%	0.00%
Injury	28.10%	34.40%	34.40%	62.50%	3.10%
Intestinal Constipation	56.20%	56.20%	56.20%	40.60%	3.20%
Nausea or Vomiting	65.60%	81.20%	81.20%	18.80%	0.00%
Need for Food Aid	18.70%	56.20%	56.20%	43.80%	0.0%
Need Help with Bath Personal Hygiene	62.50%	93.70%	93.70%	6.30%	0.00%
Need Help with Walking	62.50%	93.70%	93.70%	6.30%	0.00%
Pain	50.00%	65.60%	65.60%	34.40%	0.00%
Seizures or Focal Neurological Deficits	15.60%	18.70%	18.70%	81.30%	0.00%
Swelling	37.50%	53.10%	53.10%	43.70%	3.20%
Weight Loss	68.70%	81.20%	81.20%	18.80%	0.00%
Wound Bleeding and Bad Odor	18.70%	28.10%	34.40%	65.60%	0.00%

Note: A total of 100% of the evaluated patients declared themselves to be of white ethnicity and this data does not correlate with symptoms presented at the end of life of these patients with melanoma, which is why it was not included in this analysis.

Table 1: Descriptive analysis of the symptoms' (%) according to caregivers' perceptions presented by terminal melanoma patients one month and one week before death and on the day of death of patients with melanoma.

DISCUSSION

Melanoma is a complex and fatal disease when diagnosed in the late stages. Most patients with metastatic disease will die with a flowered process of cancer cachexia. Relative caregivers are very involved in patient care, and probably, because of emotional engagement, they remember well most of the terminality process. They reported patients' digestive symptoms with a high prevalence of nausea and vomiting, weight loss, constipation, and loss of appetite related to treatments offered to patients in advanced disease such as chemotherapy and the use of opioids for pain. However, we observed that these symptoms persisted until the day before death, increasing with time, indicating a non-ideal control. These consumptive symptoms are common and not specific to melanoma, associated with a worse prognosis related to most cancer cachexia processes [8,11].

The pain was a general symptom, with half of the individuals reporting it. It is an extensively discussed factor associated with several etiological factors, such as chemotherapy, surgical procedures like lymphadenectomy,

and mainly metastasis, causally related to these patients' poor quality of life [6]. In our study, the most common pain site was lower limbs, mainly related to the presence of in-transit or lymph node metastases, a consequence of local surgeries, and less significantly by the presence of bone metastases. This result corresponds partially to findings presented by Goto et al. that associated skin cancer with pain, with high rates of cutaneous, subcutaneous, muscular, and bone metastases as essential causes. According to the family evaluation, the pain was also among the symptoms most related to patients' discomfort being somehow neglect, even though being a symptom with multiple efficient approaches [12]. Other studies also presented pain as the primary symptom observed and controlled adequately in terminally ill patients. Especially at the end of life, these patients have fewer medical staff committed to them because oncologists, surgeons, and dermatologists generally do not assist moribund patients.

In Brazil, as in many countries, only physicians involved in palliative care can prescribe strong pain medications such as opioids leading to patients that are not included in

the palliative care program might not be adequately assisted.

Other symptoms recognized one month before death, such as edema or swelling (37.5%), were not differentiated if related to malnourishment [6,13].

At the week before death, 53.1% of patients experienced shortness of breath associated with cachexia and pulmonary metastases. This proportion was much higher than 21.8% presented 30 days before death, possibly being related as a marker of a worse in patients' health conditions. According to previous studies, dyspnea and pain are usually the most common symptoms in the last two weeks before death. Dyspnea was assessed as one of the most uncomfortable symptoms, especially during the terminal phase, and should be a concern at an early stage of the death process [12,14].

Inability to perform daily activities (18.7%) and depression (59.3%) strongly affect the patient's illness reported by the caregiver. Singer et al. demonstrated that nursing home residency or specialized clinics for terminal patients were negatively associated with pain, dyspnea, and depression. Other studies revealed a relationship between pain and depression for patients living in a nursing home at the time of death [15,16].

A high percentage of patients (62.5%) complain about ambulatory limitations and incapacity to perform personal hygiene 30 days before death, going to 93.7% one week before death, resulting in-home care difficulties. This non-medical complaint may contribute to the high number of patients' end-of-life hospitalization because of the relative caregiver's powerlessness.

In our sample, most patients died in a hospital (84.3%), and it was the place of choice according to caregivers, mainly due to the care provided for the control of symptoms. We were not able to conclude at the place of choice to die

regarding the patient's perception. We believe that despite the fact that most of them would like to die at home, this wish could change considerably according to symptom progression and the relative caregiver's ability to manage all needs. This finding is corroborated by studies in this field that showed that 67% of patients with cancer die in hospitals [7,17]. Around 21% of melanoma patients who died in hospitals could not express their palliative care needs [18,19].

Previous studies have shown that hospitalization increased the frequency of chemotherapy in the last days of patients' lives, which is considered ineffective and not rare, a signal of inept care. The same previous studies have shown that patients undergoing late line palliative systemic treatment are also exposed to more invasive end-of-life procedures, such as tubes, mechanical ventilation, and cardiopulmonary resuscitation. An integrated and widely discussed management among patients, family members, and health professionals could reduce the number of treatments and discomforts associated with the periods before death, prevailing in this phase palliative and supportive care to improve the quality of life of these patients [12,16].

Among all symptoms and complaints of melanoma end of life process, the majority is shared with other cancer terminality patients, but skin wound, bleeding and bad smell could be considered specific for skin cancer dying process like melanoma. It could be solved with simple and cheap measures bring great help to dignity of melanoma death process.

CONCLUSION

The study has some limitations, including the limited number of available medical charts that met the eligibility criteria and the low number of caregivers who agreed to participate. However, when they filled out the questionnaire, they showed massive and detailed retention

of patient symptoms and provided complete and precise information. All of them needed to be patient's relatives that normally subsisted on just one terminality process opposite professional caregivers.

Pain, depression, nausea, and vomiting should be treated more aggressively. The care team and family members should not neglect other symptoms, physical and environmental changes and be more proactive in helping patients do their hygiene and walking ability as much as possible.

Most melanoma patients finished their days in a hospital. Lack of family skills in drug management and possible complications related to the patient's clinical deterioration generate anxiety and fear for the relative's caregivers requesting hospital support. Integrating early palliative care visits in ambulatory or home care settings should guide the patient and caregiver towards personalized care, avoiding unnecessary suffering.

Knowing the death process of melanoma patients could help with family caregivers' training and improve the

quality of death of these patients either at home or in the hospital environment. This is also important to involve specialized teams that care for patients from early stages like dermatologists, surgeons, and oncologists to continued training and caregivers' education considering melanoma terminality.

We believe that palliative surgeries are underused for melanoma terminal patients. Even though it will not bring improvement in overall survival it could bring better comfort for melanoma dying patients and their families.

CONFLICT OF INTEREST

All the authors declare that they have no conflict of interest.

ETHICAL APPROVAL

This study was previously approved by the institutional review board and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

INFORMED CONSENT

Informed consent was obtained from all individual participants included in the study.

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