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The impact of a palliative medicine consultation service in medical oncology

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Abstract This prospective study of consecutive patients describes the palliative medicine consult service in a tertiary level cancer center and its impact on patient care. All inpatients/outpatients referred to the Palliative Medicine Program in a 4-month period were enrolled. Data were collected at the initial consultation using standardized forms with spaces for: reason for the consultation, referring service, demographics and history, ECOG performance status, symptoms, prognosis and diagnostic tests, treatment, and care plan. In all, 240 patients were seen: 79% were referred for symptom management; 53% were referred from medical oncology; and 50% were women. Median patient age was 67 years (range 18–96). Median performance status was 2 (1–4). Most (84%) of the patients had cancer. The cancer sites were: lung in 26% of cases, colorectal in 8%, and breast in 7%. Inpatients accounted for 53% and outpatients, for 47% of the study population. The median number of symptoms per patient was 13 (2–30). The estimated survival was <2 weeks in 15%, 2–8 weeks in 38%, 2–6 months in 37%, and >6 months in 10%. The patients' goals were: improve symptoms for 84%, return home for 55%, and no further admissions for 5%. The support systems named by patients were: family in 89%, friends in 13%, and the community in 5%. Hospice care was discussed at the consultation with 38% of the patients, would have been inappropriate for 31%, was not discussed with 22%, and had been discussed before with 9%. In response to questions about psychosocial care, a caregiver was identified by 78%, a spokesperson by 75%, and durable power of attorney was referred to by 21%. The DNR status was discussed on consult by 57%, had already been discussed with 30%, and was not discussed with 13%. Plan of care foresaw outpatient follow-up for 40%, inpatient follow-up for 32%, and transfer to palliative medicine for 27%. In 39% of cases the consults were considered late referrals. New medications suggested were opioids for 46% of patients, antiemetics for 28%, a bowel regimen for 24%, steroids for 15%, and others for 51%. (1) Palliative medicine consultation involves common complex medical, psychological, and social problems. (2) Complex symptomatology in this population is confirmed. (3) Multiple interventions were suggested even at the initial consultation. (4) Important issues such as DNR (do not resuscitate) status, support system, treatment goals, and eligibility for hospice care had often not been addressed.

Keywords Cancer · Consultation · Oncology · Pain · Palliative

Introduction

In 1990, The World Health Organization defined palliative medicine as: “the active total care of patients whose disease is not responsive to curative treatment. Control of pain, of other symptoms, and of psychological, social and spiritual problems is paramount” [1]. The American Cancer Society estimated that 553,400 Americans would die from cancer in 2001 [2]. The real needs of these patients and their families have often been obscured by the inappropriate emphasis on ineffective antitumor therapy. Persons with incurable cancer and those with advanced noncancerous diseases often experience suboptimal end-of-life care. Effective communication and decision making, relief of distressing symptoms, management of complications, provision of psychosocial care, and care of the dying are the goals of palliative medicine.

Most palliative medicine services in the United States are based on a consultation model, and most physicians who provide palliative medicine have a background in medical oncology, internal medicine, family practice or neurology [3]. The existing literature does not describe all aspects of a palliative medicine consultation. The Cleveland Clinic Foundation Palliative Medicine Program offers comprehensive integrated care including an in- and outpatient consultation service, but also an inpatient acute care unit and an outpatient clinic, palliative home care, hospice home care, and inpatient hospice care [4, 5]. This study describes the palliative medicine consult service in the Cleveland Clinic Cancer Center and its impact on patient care.

Methods

Design/patients

Definitions of the term ‘palliative medicine consult’ or ‘referral’ vary [6, 7, 8, 9, 10, 11]. At the Cleveland Clinic, we define this as a palliative medicine consult generated solely by a physician-signed order from a medical service that is currently primarily responsible for patient care, requesting advice or assistance in directing patient management. Newly referred patients are seen initially in both inpatient and outpatient settings by a fellow physician in training and the sessions are then staffed by a palliative medicine attending physician. We routinely use a dictated assessment prepared according to a standard format and a preprinted problem list to document the information collected [12]. We conducted a prospective survey to describe the content and impact of the palliative medicine consult service at the Cleveland Clinic Taussig Cancer Center. All consecutive inpatients and outpatients referred to the Palliative Medicine Program in a 4-month period were evaluated.

Data collection

Data were collected by the attending and fellow physician at the initial consultation using standardized forms. Data recorded included: reason for the consult, referring service, demographics and history, Eastern Cooperative Oncology Group (ECOG) performance status, prognosis, recommended diagnostic tests, treatment plan, the ‘do not resuscitate’ (DNR) status, hospice eligibility, the plan of care, and the patient’s goals and support system. The presence of symptoms was assessed by directly asking the patients using a 38-symptom checklist. Communication information, time consumption, and information about the appropriateness of the consult were collected. The consult was considered a late referral if the attending physician answered the following question affirmatively: “Could the patient have benefited from an earlier consult?”. All the data reported refer only to issues dealt with during the initial consultation visit, and were collected prospectively in consecutive patients.

Results

Patients

In all, 240 consecutive consults were seen: 120 (50%) were women; the median age was 67 years (range 18–96); 128 (53%) were inpatients and 112 (47%), outpatients. The median ECOG performance status was 2 (1–4). Most (202, or 84%) of the patients had cancer, and the most common primary site was the lung, followed by colorectal sites and the breast (Table 1). Congestive heart failure (*n*=21) was the most common noncancerous primary disease, followed by multiple organ failure (*n*=10). Bone metastases were present in 24% and liver metastases in 22%. The median time between diagnosis of primary disease and the time of consult was 9.4 months (range 0.1–359). Most patients (53%) were referred from within the Hematology and Medical Oncology Department (Table 2). The rest were from Internal Medicine and its subspecialties, Radiation Oncology, Obstetrics and Gynecology, Surgery, the Intensive Care Unit, and ENT. Two patients were referred from Neurology, 2 self-referred, 1 from the Emergency Department, and 1 from another hospital.

Most patients seen at these consults (79%) were referred for symptom management (Table 3). More than one reason per patient was often identified (median 2; range 1–4). Hospice referral, end-of-life discussion, transfer of care, discharge planning and psychosocial problems were other reasons. Our estimate of prognosis was less than 2 days for 1 patient, 2–14 days for 36 (15%), 2–8 weeks for 91 (38%), 2–6 months for 89 (37%), and more than 6 months for 23 (10%). Goals of

Table 1 Primary cancer (*N*=202)

Diagnosis	*n*	%
Lung	53	26
Colorectal	16	8
Breast	15	7
Esophageal	14	7
Pancreatic	14	7
Unknown primary	13	6
Head and neck	10	5
Other	67	34

Table 2 Referring service

Service	*n*	%
Hematology and Medical Oncology	128	53
Internal Medicine	40	17
Internal Medicine subspecialties	16	7
Surgery	14	6
Radiation Oncology	13	5
Obstetrics and Gynecology	11	5
Intensive Care Unit	7	3
Ear Nose and Throat	5	2
Other	6	3

Table 3 Reason for consult[a]

Reason	*n*	%
Symptom and/or complication management	189	79
Hospice	100	42
End-of-life discussion	80	33
Transfer of care	51	21
Discharge planning	27	11
Psychosocial	3	1
Other	6	3

[a] More than one reason per patient was identified (median 2; range 1–4)

their own were identified in 206 patients, and more than one goal per patient noted in some. Improved symptom control was the goal for 174 (84%), return home for 114 (55%), obtaining hospice care for 22 (11%), no further hospital admissions for 11 (5%), and a comfortable death for 10 (5%). Outpatient follow-up was a major focus of the plan of care for 94 (39%), inpatient follow-up for 77 (32%), transfer to the palliative medicine unit for 64 (27%) and no follow-up for 5 (2%).

Symptoms

Symptoms were not assessed in 34 patients, mostly because of an altered level of consciousness at the time of the initial consultation. The median number of symptoms per patient was 13 (2–30). Weakness, lack of energy, easy fatigue, dry mouth, pain, anorexia, weight loss, early satiety, sleep problems, and dyspnea were the ten most common symptoms (Table 4).

Diagnostic tests

Laboratory tests were the most common new diagnostic procedure suggested by the consultation team. Fifty-eight tests were ordered for 38 patients. Complete blood count was the most common (48%), followed by thyroid function tests. Plain film X-rays were ordered for 27 (11%), MRI for 11 (5%), bone scan for 8 (3%), CT scan for 4 (2%), and body fluid culture for 4 (2%). Other diagnostic procedures included paracentesis for 3, thoracentesis for 2, bronchoscopy for 1, Doppler study for 1, gastrointestinal series for 1, post-void residual study for 1, and lung biopsy for 1.

Nonpharmacological recommendations

Radiation therapy was recommended for 12 (5%), physical therapy for 6 (3%), occupational therapy for 5 (2%), and respiratory therapy for 5 (2%). Other recommendations included: consulting other services on behalf of 5 patients, chest tube for 1, Greenfield filter insertion for 1, pneumococcal vaccine for 1, and speech therapy for 1.

Table 4 Most common symptoms (N=206)

Symptom	*n*	%	Symptom	*n*	%
Weakness	173	84	Dysphagia	53	26
Lack of energy	165	80	Memory problems	50	24
Easy fatigue	164	80	Anxiety	50	24
Dry mouth	148	72	Dizziness	48	23
Pain	145	70	Bloating	46	22
Anorexia	128	62	Wheezing	45	22
Weight loss	126	61	Confusion	44	21
Early satiety	120	58	Hiccup	43	21
Sleep problems	104	50	Dyspepsia	33	16
Dyspnea	99	48	Tremors	31	15
Cough	92	45	Headache	29	14
Taste change	90	44	Sore mouth	28	14
Nausea	83	40	Itching	27	13
Constipation	83	40	Diarrhea	23	11
Depression	66	32	Aches	20	10
Belching	59	29	Bad dreams	19	9
Hoarseness	59	29	Hallucinations	13	6
Vomiting	58	28	Blackout	5	2
Edema	55	27	Other	27	13

Table 5 Medication changes

Drug class	New drugs		Dose, route, change		Discontinue	
	n	%	*n*	%	*n*	%
Antiemetics	68	28	2	1	13	5
Laxatives	57	24	7	3	7	3
Opioids	110	46	27	11	53	22
Corticosteroids	35	15	9	4	–	–
Other	123	51	31	13	14	6

Table 6 Most commonly prescribed new drugs (≥5%)

Drug	*n*	%
Morphine	86	36
Metoclopramide	65	27
Docusate	48	20
Dexamethasone	35	15
Chlorpromazine	22	9
Bisacodyl	21	9
Magnesium hydroxide	19	8
Famotidine	18	8
Haloperidol	17	7
Baking soda	16	7
Methylphenidate	12	5
Glycopyrrolate	12	5
Methadone	9	4
Spironolactone	6	3
Diclofenac	6	3
Fentanyl	5	2
Acetaminophen	5	2
Oxycodone	5	2
Hydrocodone	4	2
Fatty acids	4	2

Pharmacological recommendations

Dose and route change and discontinuation of existing drugs were frequent. One hundred sixty-three adjustments were made, most commonly in medication with opioids, antiemetics, laxatives, and corticosteroids (Table 5). New medications were also recommended. The median number of new medications proposed was 2 (0–5). Comparison of drug classes showed that opioids were the most common (Table 5). Morphine was the individual drug most commonly recommended, followed by metoclopramide, docusate, dexamethasone, and chlorpromazine (Table 6).

End-of-life issues

Only 74 (31%) had a DNR order in their chart before the consult. DNR was discussed on consult by the palliative medicine staff in 135 (81%) of the other 166 consults. Hospice eligibility was discussed at the consult with 91 (59%) of the 153 hospice-appropriate patients who were not already enrolled in hospices. Seventy-five patients (38%) were judged not to be hospice appropriate at the time of the consult. Twelve patients (5%) were already enrolled for hospice care at the time of the consult. Forty-two (18%) patients had concerns about family and 13 (5%), about finances. Each patient's support system was identified, and more than one support system per patient was noted. Family was the support system for 213 (89%), friends for 32 (13%), and the community for 13 (5%). A caregiver was identified in 187 (78%) cases, a spokesperson in 179 (75%), and a durable power of attorney in 51 (21%).

Time and communication issues

The median time spent in consultation was 60 min (range 20–150) for the fellow and 30 min (10–240) for the attending physician. Both the fellow and the attending physician also talked to the patients' families in nearly two-thirds of the consults (Table 7). The referring service physician, house staff, nurse, and social worker were also contacted in some consults. Two hundred thirty-one consults (96%) were appropriate according to our definition. Ninety-three consults (39%) were considered late referrals.

Discussion

Patients

The distribution by primary cancer site and of age makes the study population representative of the advanced cancer population in the United States [2]. Although the observation that most of our patients were referred from Hematology/Oncology was not unexpected, it is noteworthy that the remainder were from multiple and diverse other departments.

Table 7 Communication on consult

	Fellow doctor (*N*=185)		Attending doctor (*N*=240)	
	n	%	*n*	%
Family	106	57	159	66
Referring service house staff	89	48	44	18
Referring service nurse	36	20	12	5
Referring physician	24	13	72	30
Referring service social worker	4	2	2	1
Other	0	0	9	4

Consult goals

The patients we see on consult are seriously ill, with advanced disease and a mixture of medical and psychosocial problems. Managing these problems is often complex, because of the large number of problems, polypharmacy, and the different people involved in the patient care. The large number of pharmacological and nonpharmacological recommendations and the time spent on these consults reflects the complexity of the patient problems.

We were successful in achieving our consult goals in most patients. The reason for the consult and the symptoms and disease history were identified in all patients. A follow-up plan was established with most patients, which was followed in the outpatient clinic or in the hospital with no need to transfer to our palliative medicine unit. The various subsequent sites of care support the need for palliative medicine programs with a comprehensive integrated structure. DNR status and hospice eligibility were usually discussed. Patients' own goals were identified, and most patients wanted improvement of their symptoms. The patient's support system, a caregiver, a spokesperson, and a durable power of attorney were identified in most patients.

Consultation goals may not all be achieved at the initial consultation because:

1. The patient is not ready for the transition to palliative care
2. An urgent medical, psychological, or psychosocial problem takes priority when the patient is approached
3. The patient is actively dying or unconscious
4. There are multiple services managing the patient

Experience in discussing end-of-life issues and in introducing palliative medicine services are key in overcoming these difficulties. It is noteworthy how often these had not been addressed prior to the palliative medicine consultation, despite illnesses which were well known to be life-threatening. Prioritizing patient problems, educating referring services about the benefits of earlier referral, and communicating with all services involved is beneficial. Although we tried to communicate with each patient's family and referring service team members, it is often difficult to do that on initial consultation. More communication with the family and the referring service can often be achieved on follow-up visits or once the patient has been transferred to our unit, if this is indicated.

Symptoms and consult recommendations

A previous study carried out by the Palliative Care Service at the Cleveland Clinic Foundation from 1990 to 1992 evaluated the symptoms of 1,000 advanced cancer patients [13, 14, 15]. The same 38-symptom list was used to collect symptoms. The study population was consistent in age and diagnosis with estimated cancer deaths in the United States. The median number of symptoms then was 11. The 10 most common symptoms were similar in this study. Pain and constipation were more frequent in the earlier study, and fatigue and dry mouth less common. Performance status was worse in the previous study. Better use of analgesics and laxatives by referring services in the past 10 years since the start of the palliative medicine service at the Cleveland Clinic Foundation may explain this change in rank order.

Recommending tests and pharmacological and nonpharmacological interventions were also part of the consultation. Managing symptoms aggressively, trying to identify reversible causes for medical problems, and the population heterogeneity explain the large number of recommendations. It is noteworthy that drugs for nonpain symptom management were as commonly recommended as analgesics. Opioids (morphine as first choice), laxatives, antiemetics, and corticosteroids were the key drugs suggested.

Other studies

Comparing studies describing consultation in palliative medicine is difficult because of variations in the defined goals of the service, patient populations, and the setting (acute care hospital versus inpatient hospice unit). Some other studies have reported data on consultation in palliative medicine [6, 7, 9, 11]. They are difficult to evaluate because:

1. In one the term 'consult' was limited to referrals admitted to a palliative care unit [6].
2. Most were conducted in hospice inpatient settings [7, 9, 11].
3. One excluded cancer patients [7]
4. Two were retrospective [6, 7]

Two prospective studies have been conducted in the United States [8, 10]. The first [8] was retrospective and described only the inpatient consult service in an academic hospital. Cancer was the diagnosis for 57% of the total 325 consecutive patient. Median age was 71 years, and mean Karnofsky performance status was 25%. Almost half (49%) died during the index hospital stay. Data about selected symptoms and recommendations was evaluated by either a physician or a nurse on the day of discharge or death. The second study [10] described both inpatient and outpatient consult services in an academic institution. Seventy per cent of the total of 100 consecutive patients had cancer. Most patients were referred for pain management. Sixty-seven were men, but age was not reported. Median ECOG performance status was 3. The new information from our study not reported in previous two studies includes a 38-symptom checklist, medical interventions, individual drug recommendations, nonpharmacological recommendations, DNR, hospice eligibility, estimated prognosis, communication with the family and the referring service, and patients' goals and support system. The sophistication and complexity of the consult process suggest that every hematology/oncology department or cancer center should have such a service.

Conclusions

The Palliative Medicine consult service population in our Hematology/Oncology Department evaluates seriously ill patients with multiple medical, psychological and social problems. These were identified and appropriate recommendations were made. Most consults were the results of referrals for symptom and complication management. Multiple pharmacological and nonpharmacological interventions were suggested. Drugs for nonpain symptom management were as commonly used as analgesics. End-of-life issues such as DNR status, support system, treatment goals, and eligibility for hospice care were often addressed by the consult team, in many cases for the first time. Communication was conducted with up to two-thirds of the patients' families. The complexity of the patient problems means the consultation is a time-consuming activity. Palliative medicine consultation had a major impact on the quality and direction of patient care. Palliative medicine services should be established in every cancer center. A longitudinal study to evaluate the effect of such a service on quality of life would be important.

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