



Original Research Article

Efficacy of hospital palliative care team model in delivering palliative care to terminally ill cancer patients

A Balasubramanian^{1,*}¹Dept. of Surgical Oncology, Jawaharlal Institute of Postgraduate Medical Education and Research, Puducherry, India

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ABSTRACT

Introduction: Palliative care is an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual. The aim of this study is to assess the efficacy of Hospital Palliative Care Team (HPCT) in improvement of delivery of palliative care in terminally ill cancer patients who had consultations and care delivered and guided by the HPCT.

Materials and Methods: A retrospective analytical study was done on all advanced incurable cancer patients who attended Oncology department in a tertiary care hospital, Pondicherry for a period of one year, where the HPCT was formed for enhancing palliative care. The study parameters included site distribution of advanced cancers, common symptoms in cancer patients which required addressal by HPCT, numerical pain score and surgical and non-surgical interventions done.

Results: A total of consecutive 70 incurable advanced cancer patients were included. Among the group, Breast cancer was the most common by site and Bone cancer was the least. The numerical pain score were recorded on day 0, 3 and 30 which showed mean score of 6.3, 1.6 and 0.9 respectively. Palliative radiotherapy, chemotherapy and surgical procedures were offered in 4, 9 and 8 patients respectively and a few were offered minor interventional procedures.

Conclusion: Implementing HPCT model of palliative care could deliver effective symptom control with the advantage of better integration of multidisciplinary palliative care. A team of consultants management could enhance quality of palliative care services as compared to single palliative care specialist whose main focus of care may be pain management as compared to HPCT with a multidisciplinary team with expertise in various aspects of cancer patient management.

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1. Introduction

Palliative care is defined as “an approach that improves the quality of life of patients and their families facing the problems associated with life threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual.”¹

Palliative care can assist in transforming patient care from a disease focussed approach to a patient centred

care philosophy, where the needs of the patient and the patient/family goals are paramount for planning care. Patient centered care widens the focus and it requires coordination across multiple specialties and disciplines. The goals of palliative care continue to focus on the relief of suffering and the improvement of the quality of life for patients and with advanced incurable illnesses.

The delivery of Palliative care can be home based or hospital based. Depending on the local needs and availability and accessibility to palliative care services in that locality, there are many challenges in effectively delivering palliative care for those in need.

* Corresponding author.

E-mail address: drbalasubram@gmail.com (A. Balasubramanian).

Miller et al had described about three models for delivering palliative care in nursing homes. They pointed out that the most established model as hospice; Many nursing homes contract with a hospice agency for services and the patients from nursing homes who received hospice services before they died, had increased from 14% in 1999 to 33% in 2006. They also pointed out 'As compared with nursing home care that does not include hospice, hospice use in nursing homes is associated with lower rates of invasive therapies and hospitalizations, improved management of pain and other symptoms and higher family satisfaction with care.' Palliative care consultation is one other model in which an external palliative care physician or nurse practitioner provides recommendations. The third model is 'nursing homes which have developed internal palliative care teams or specialized units.'² In the present study, the authors have studied the efficacy of Hospital Palliative Care Team (HPCT) formulated based on local needs and availabilities in a medical college hospital for the purpose of improvement of delivery of Palliative care services in advanced incurable Cancer patients.

2. Materials and Methods

A retrospective analytical study was done in Oncology department in a tertiary care hospital, Pondicherry for a period of one year where the HPCT was formed for enhancing palliative care. The team consists of members from various specialties including Consultants from Radiation Oncology, Surgical Oncology, Anesthesiology, Psychiatry, General Medicine, Pediatrics, Dermatology, Cardiology, Neurosurgery, General Surgery and Palliative care nurse with the aim of contribution from all members of their expertise to improve upon the quality of Palliative care. All advanced Cancer Patients were assessed by all members of this multidisciplinary HPCT and those patients who could benefit from active specific anticancer therapy were advised appropriately. For all Patients Psychiatric assessment and counseling done and psychotropic drugs were prescribed by Psychiatrist as required. With Oncologist Consultations, Institution of Palliative Radiotherapy, Palliative Chemotherapy including Metronomic delivery of Chemotherapy for those patients with advanced Cancers and with metastases to various body sites was carried out as indicated. Minor and Major Surgical procedures that range from Needle aspiration and drainage for pleural effusion, Ascitic fluid tapping, Instillation of Chemotherapeutic agents into the peritoneal cavity for control of ascites, Feeding Gastrostomy, Feeding Jejunostomy, Tracheostomy, Colostomy and Laparotomy and Intestinal bypass for bowel obstruction was carried out as appropriate in needed patients. Music therapy and Yoga sessions were included as adjuvant. An observational study was done on cancer patients managed by the HPCT. All advanced incurable cancers involving Breast, Head and

Neck, Thoracic, Gastrointestinal, Gynecologic and other cancers of all age groups were included in this study and excluded patients who came for non-cancer diagnoses. The following parameters such as Site distribution of Advanced Cancers, Common Symptoms and Problems in Cancer patients which required addressal by HPCT and numerical pain score of the patients from the day of first contact day 0 to day 30 were analysed in this study.

3. Results

During the study period, there were 70 patients with advanced incurable Cancers included in the study. The mean age of patients was 56.3 years with the median of 58, mode of 65 and the youngest patient was a 3 year child with brain stem glioma and the oldest was 87 years with cancer of the Caecum. 41.4% were males and the majority were females, i.e., 58.6%. Site distribution of Advanced Cancers encountered by HPCT showed a wide variety of advanced incurable cancers involving Breast, Head and Neck, Thoracic, Gastro intestinal, Gynecologic and other miscellaneous cancers studied on 70 patients is shown in Table 1. Of which the most common was Breast cancer (15.7%) followed by Stomach and Oesophagus (14.3%) and Lung and Colorectal accounting for 10%. The least common was Bone cancer (1.4%).

Analysis of common Symptoms / Problems in Cancer patients which required addressal by HPCT showed Pain was the most common symptom (94%) and other symptoms included Nausea, Vomiting, Constipation, Diarrhoea, Cough, breathlessness, Fear, Loss of appetite, Ascites, Bowel obstruction, Urinary incontinence, Altered sensorium, Paraplegia, quadriparesis, Myiasis. (Table 2)

The numerical pain score recorded on day 0, at first consultation with HPCT for 66 patients, the mean score was 6.3, and on day 3 it was 1.6 with Cohen's d effect size of 2.93 and on day 30 the mean score was 0.9 with Cohen's d effect size of 3.37 thereby signifying effective pain control in patients, achieved by HPCT. (Figure 1)

Palliative Radiotherapy was instituted in 4 patients as advised by the Radiation oncologist in the team and Palliative Chemotherapy including Metronomic delivery of Chemotherapy for those patients with advanced Cancers and with metastases to various body sites was administered in 9 patients. Minor interventional procedures that include Needle aspiration and drainage for pleural effusion in 3 patients, Ascitic fluid tapping in 8 patients and Instillation of Chemotherapeutic agents into the peritoneal cavity for control of ascites in 6 Patients were also carried out.

Palliative Surgical procedures were offered for 8 patients including Feeding jejunostomy in 3 cases, Feeding gastrostomy in 1 case, Tracheostomy in 1 case, Laparotomy and intestinal bypass/ Colostomy for bowel obstruction in 3 cases and 1 patient who presented with prolapsed cervical cancer with maggots and urethral obstruction after treatment

of myiasis underwent Anterior Pelvic Exenteration after oncologist consultation and She is on follow up and disease free for more than 1 year.

4. Discussion

Palliative care and end-of-life discussions have undergone a remarkable growth since the new millennium.³ The most common setting for non hospice palliative care services in the United States, and in much of the world, is the hospital. Palliative care programs were initially established within academic medical centres in North America and have spread to other hospital types.⁴ Within hospitals, the primary model of care delivery is the interdisciplinary consultation team.⁵ The last decade has witnessed a 138% increase in palliative care teams within hospital settings.⁶

The new WHO definition stresses upon the provision of palliative care early in the course of illness and not restricting it to late stages. It has its basis upon supporting patients suffering from chronic diseases with high symptom burden and including the resultant issues in their family members. ‘Palliative care’ is different from ‘hospice care’ which is supporting patients at end of life to allow them to die in comfort and with dignity.

Primary Cancer palliative care refers to the delivery of supportive and symptom care added to standard oncology care by health-care professionals who are not palliative-care specialists, such as oncologists and primary-care clinicians. Oncologists have an important role in delivering primary palliative care. Integration of oncology and palliative care necessitates collaboration and communication regarding the roles and responsibilities between primary, secondary, and tertiary palliative care, such that the different teams can function in unison.⁷

In our observations, the HPCT came across a wide variety of advanced incurable cancers involving Breast, Head and Neck, Thoracic, Gastro intestinal, Gynecologic and other cancers. Pain categorized as mild, moderate or severe was the most common symptom and other symptoms include Nausea, Vomiting, Constipation, Diarrhoea, Cough, breathlessness, Fear, Loss of appetite, Ascites, Bowel obstruction, Urinary incontinence, Altered sensorium, Paraplegia, Quadriplegia, Myiasis etc., The wide spectrum of diseases with varied disease courses and diverse symptom profile require a well integrated multidisciplinary team of specialists for optimal palliative care in cancer patients.

Palliative care in India is still at an early stage of development and faces numerous problems. The WHO step ladder pattern has been a landmark, a watershed, a milestone in the pain management timeline. The availability, accessibility, and effectiveness of modern methods of pain control make it a moral mandate for every physician to be knowledgeable in the use of analgesics. It is estimated that less than 3% of India’s cancer patients have access to adequate pain relief. Inadequate attention to pain relief is

tantamount to moral and legal malpractice and is a violation of the principle of beneficence.⁸ The prevalence of pain in our study population was 94% much higher rate compared to few other studies where the authors reported a prevalence of 71% & 70.04%.^{9,10} The numerical pain score recorded on day 0, at first consultation with HPCT for 66 patients, the mean score was 6.3, and on day 3 it was 1.6 with Cohen’s d effect size of 2.930586 and on day 30 the mean score was 0.9 with Cohen’s d effect size of 3.37. These values are highly significant and show that patients had good symptom relief while under HPCT team care. There was improvement in all other symptoms and patient and attender satisfaction was good as given by feedback.

All our patients were counselled by dedicated trained HPCT Staff and Oncologist Consultations were taken for all the patients to explore the possibility of any specific anti cancer treatment for avoiding losing the window of opportunity for cure if there. There were 45 admissions with in-hospital days ranging from 1 to 22 days. Few patients required multiple admissions ranging from 2 to 5. End of Life Care (EOLC) planning was done. Tele follow up services were also provided. 12 patients died in the Hospital. i.e., 17% of total patients. 37 patients (52.8%) died within 30 days of HPCT consultation.

Cancer Palliative care is enhanced by HPCT by better integration of Palliative Surgical interventions whenever indicated. In addition to effective pain management which is only a part of palliative care, HPCT could achieve a better comprehensive palliative care. The use of specific anticancer therapy viz. Palliative Radiotherapy, Palliative Chemotherapy including Metronomic Chemotherapy when used in appropriate cases have the potential for reducing the requirement of analgesics including morphine. In fact, the continuation of some form of judiciously chosen specific anticancer therapy instead of abandonment e.g., metronomic chemotherapy gives psychological benefit to the patient and the family in addition to better overall symptom control along with improvement in survival to some extent in a proportion of patients.

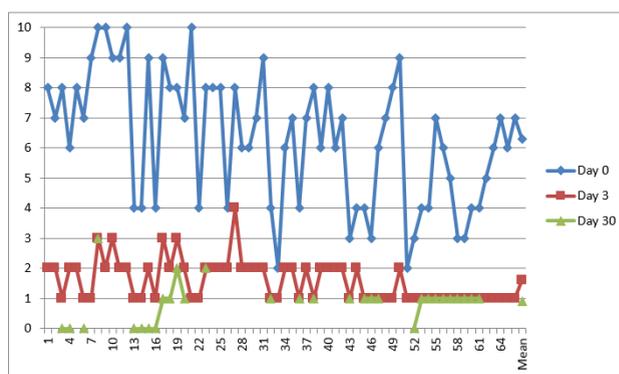


Fig. 1: Line Chart showing day 0, day 3 and day 30 pain score of the patients managed by HPCT

Table 1: Site distribution of advanced cancers encountered by HPCT

S. No.	Site of Cancer	Number of Patients	Percentage
1	Breast	11	15.7
2	Stomach and Oesophagus	10	14.3
3	Colorectal	7	10
4	Lung	7	10
5	Oral	6	8.6
6	Ovary	6	8.6
7	Pancreas	6	8.6
8	Liver, Gall Bladder	5	7.2
9	Pharynx and Larynx	4	5.7
10	Cervix	3	4.3
11	Brain	2	2.8
12	Bone	1	1.4
13	Miscellaneous	2	2.8
	Total	70	100

Table 2: Common Symptoms / Problems in Cancer patients which required addressal by HPCT

S.no	Symptom / Problem	Number of Patients(n)	Percentage
1.	Pain	66	94
2.	Loss of appetite	28	40
3.	Fear	22	31
4.	Nausea	21	30
5.	Vomiting	16	22
6.	Ascites	12	17
7.	Cough	11	15
8.	Breathlessness	9	12
9.	Constipation	9	12
10.	Diarrhoea	5	7
11.	Bowel obstruction	5	7
12.	Urinary incontinence	5	7
13.	Myiasis	4	6
14.	Altered sensorium	4	6
15.	Paraplegia/Quadriplegia	3	4

5. Conclusion

Palliative care is a fundamental component of cancer care. HPCT model of Palliative care is an effective model for delivering palliative care for Cancer Patients. Cancer Palliative care is enhanced by HPCT by better integration of Palliative Surgical interventions, Palliative Radiotherapy, Chemotherapy, Psychiatrist and Pain services whenever indicated. Multidisciplinary team could better explore the best possible interventions in Cancer patients in care. Though Major proportion of the Cancer patients who had come to HPCT were in their last few days of life, HPCT could deliver efficient palliative care by adding life to days. A Team of Consultants management could enhance quality of palliative care services as compared to single palliative care specialist whose main focus of care may be pain management as compared to HPCT with a multidisciplinary team with expertise in various aspects of Cancer Patient management could deliver better and ensure comprehensive palliative care. HPCT model is a

customizable model very appropriate for Medical College Hospitals and Multispecialty Hospitals to improve upon the quality of palliative care services. Large scale studies in our regions are required to study regarding the advantages of implementing HPCT model of palliative care as well as effective integration of Palliative care into comprehensive cancer care.

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7. Source of funding

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8. Conflict of interest

None.

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Author biography

A Balasubramanian Professor

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