Effect of Palliative Drug Therapy on Quality of life in Advanced Head and Neck Cancer Patients

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Abstract Advanced cancer patients are managed by palliative care and its main aim is to provide best possible quality of life to the patients by symptom management. Pain is the most agonizing symptom experienced by advanced head and neck cancer patients. Control of pain hence requires more attention by the caregiver in order to improve their quality of life. Recently quality of life issues have emerged as a main focus of cancer treatment as compared to conventional increase in survival rate. This study mainly focuses on the effect of palliative drug therapy on quality of life.

Keywords Advanced head and neck cancer · Quality of life · Palliative drug therapy

Introduction

Cancer incidence is increasing at an alarming rate worldwide. Head and neck cancers (HNCs) comprise of 5% of all cancers and this rate is increasing by 2% every year. HNCs encompass a wide range of tumors that occur in several areas of head and neck region. They include the nasal cavities, paranasal sinuses, oral cavity, larynx, pharynx, salivary gland, thyroid gland, ear, orbit and skull base [1]. The primary modalities of treatment of HNC include surgery and radiotherapy, although chemotherapy is increasingly being used for advanced stages. Despite newer developments, most HNCs are not completely curable and majority of patients suffer to an advanced stage of disease.

For these patients the only available management is palliative care which focuses mainly on symptom relief and improvement of quality of life (QOL). Pain is the most common and distressing symptom encountered in nearly 80% of advanced cancer patients [2]. Therefore control of pain has prime importance in palliative care [3]. Rational drug therapy remains the mainstay of palliative care. Radiotherapy, chemotherapy and surgery also have a place in palliative care, provided that the symptomatic benefits clearly outweigh the disadvantages. This study was conducted with the objective of studying the effect of palliative drug therapy on QOL in advanced HNC patients.

Materials and Methods

This study was a prospective, observational cohort study conducted on advanced cancer patients receiving palliative care in Himalayan institute of medical sciences, Dehradun—a tertiary care centre. A total of 150 advanced cancer patients irrespective of tumor site were included in the study. The data of 40 advanced HNC patients is presented here. The patients were enrolled at baseline and their site of lesion, symptomatology and treatment received by them was recorded. Functional Performance assessment of patients was also done by using Karnofsky Performance Index [4]. It is the most widely used measure of functional performance and is employed frequently in evaluating cancer chemotherapy trials. The QOL of the patients were evaluated at the baseline and follow up was conducted after one month and subsequently at two month to evaluate the effect of palliative drug therapy on QOL. The QOL survey used in this study evolved from the work by Padilla et al. [5]. It is a multidimensional instrument consisting of 100-mm visual analog scales with word extremes as

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anchors at each end. Items in the survey represent the areas of psychological well being, physical well being, general symptom control, specific symptom control and social support. Based on the response to the questionnaire, a sum total of response was calculated to know the QOL.

Results and Observation

A total of 40 advanced head and neck cancer patients were included in the study. Table 1 shows the patients characteristics. There were 12 patients with oral cavity tumor, 12 with laryngeal cancer, 8 with pharyngeal tumor, 3 with paranasal sinus cancer, 3 with salivary gland malignancy and 2 with thyroid tumor. All the patients either had stage IV cancer, recurrent cancer or distant metastasis. Karnofsky Performance Index was <70 in 5 patients. Pain was the most frequent symptom occurring in 95% of patients. Analgesic drug therapy was prescribed according to WHO analgesic ladder depending upon the severity of pain. Polypharmacotherapy was frequent: patients consumed approximately 8.7, 0.38 (mean, SE) drugs on average during the period of two month follow up. The major categories of drugs given to the patients were analgesics, cough suppressants, antiemetics, multivitamins, antiulcer agent, corticosteroids and antibiotics. In addition, 24 patients also received palliative chemotherapy. Apart from drug therapy 28 patients also underwent palliative surgery like tumor debulking, tracheostomy and feeding gastrostomy. 30 patients received radiotherapy with the intention to lower the tumor burden. The results of effect of palliative drug therapy on QOL index are shown in Table 2. Results show that there was a significant improvement in QOL scores expressed as mean $\pm$ SE 950.39 ± 33.55 versus 1336.67 ± 40.99 ($P < 0.01$) after 1 month and 1405.49 ± 51.88 ($P < 0.01$) after 2 month in 40 patients.

Discussion

Patients with advanced cancer have number of devastating symptoms requiring comprehensive treatment. The prognosis of cancer usually depends upon certain factors like tumor burden (determining the symptomatology) and performance status of the person, which is reflected by the karnofsky's performance status [4]. Person with <70 score usually have poor prognosis. Symptom management is one of the key points of palliative medicine and documentation of pain and other symptoms is the first step for effective treatment. Improved treatment of symptoms is associated with enhanced QOL and patient satisfaction [6, 7]. In accordance with other studies pain was the commonest symptom occurring in our patients [8]. The pain was

Table 1 Baseline demographic and baseline characteristic of Patients

No of patients (<i>n</i> = 40)		
Sex Distribution		
Male	28	
Female	12	
Age Distribution		
Median	55 years	
Range	36–66 years	
Site		
Oral cavity	12	
Larynx	8	
Pharynx	12	
Paranasal sinuses	3	
Salivary gland	3	
Thyroid gland	2	
Karnofsky performance status*		
Mean ± SD: 64.44 ± 12.39		
≤70	5	Range: 40–90
≥70	35	
Tumour burden		
Distant metastasis	8	
Locally advanced	40	
Recurrence	6	
Other palliative treatment		
Radiotherapy (RT)	30	
Chemotherapy	24	
Surgery	28	

Table 2 Effect of palliative drug therapy on pain scores and QALY in patients with advanced cancer over a period of two month follow up

	QOL# (Mean $\pm$ SE)
Baseline ($n = 40$)	950.39 ± 33.55
1 Month ($n = 40$)	$1336.67 \pm 40.99^{**}$
2 Month ($n = 40$)	$1405.49 \pm 51.88^{**}$

** P value < 0.01 versus 0 month baseline values. # QOL Quality of life index (0-minimum, 2800-maximum). Increase in score denotes improvement in quality of life [5]

controlled in all patients mainly with drugs, according to WHO analgesic guidelines. Since multiple symptoms need to be treated, advanced cancer patients frequently receive polypharmacotherapy. In this study patients received 8.7, 0.38 (mean, SE) drugs on an average during the observation period of two months although not receiving more than [2, 3] drugs at any time. In another study done elsewhere patients received 2.43 drugs on average [9]. Apart from palliative drug therapy the patients were also subjected to

palliative chemotherapy, radiotherapy and surgery. It is mainly undertaken to palliate some symptoms of tumor. But it greatly increases the cost of therapy.

Assessing outcomes in palliative care is difficult [10]. QOL was one main parameter assessed in our patients as an outcome measure with pain cited as the key component of QOL [11]. WHO has clearly mentioned that QOL is more appropriate outcome variable for evaluating the efficacy of palliative care [12]. There was a significant improvement in QOL of the patients parallel to the reduction in pain. Since pain is the major symptom experienced by the patient of HNC, its control has major impact on QOL. The tool used in our study was mainly sensitive to capture the effects of pain management overtime. It also enables us to evaluate the given treatment not only with regard to its effect on pain intensity but also with regard to its overall impact on the total individual. The QOL score used here was not HNC specific as all patients with advanced disease irrespective of cancer site were included in the study. The reliability and validity of the questionnaire have been validated previously. There is lack of specialized palliative care services in our country as compared to west, so further research is needed to find out the impact of comprehensive palliative care on QOL. Earlier studies have already demonstrated that the existence of a palliative care services results in improved standards of care [13].

Conclusion

In the past decade there has been a considerable increase of interest in QOL issue of oncology. In this study, palliative drug therapy produced a significant improvement in the QOL of the patients. Although the study was done stringently, limitations like short duration of follow up and

smaller number of patients were there. Further research in palliative care is warranted with larger number of patients to emphasize the outcomes and requirement of specialized palliative care services for advanced HNC patients.

Reference

1. Pusic A, Liu JC, Chen CM et al (2007) A systematic review of patient reported outcome measures in head and neck cancer surgery. *Otolaryngol Head Neck Surg* 136:525–535
2. Arner S, Meyerson BA (1988) Lack of analgesic effect of opioids on neuropathic and idiopathic forms of pain. *Pain* 33:11–23
3. Twycross RG, Lack SA (1990) *Therapeutics in terminal cancer*, 2nd edn. Churchill Livingstone, London
4. Yates JW, Chalmer B, McKeegney FP (1980) Evaluation of patients with advanced cancer using Karnofsky Performance status. *Cancer* 45:2220–2224
5. Padilla GV, Presant C, Grant MM et al (1983) Quality of life index for patients with cancer. *Res Nurs Health* 3:117–126
6. Bookbinder M, Coyle N, Kiss M et al (1996) Implementing national standards for cancer pain management program model and evaluation. *J Pain Symptom manage* 12:334–347
7. Morrison RS, Magaziner J, McLaughlin MA et al (2003) The impact of post operative pain on outcomes following hip fracture. *Pain* 103:303–311
8. Foley KM (2003) Controlling cancer pain. *Hosp Pract* 35: 101–108
9. Di Maio M, Perrone F et al (2003) Supportive care in patients with advanced non cell lung cancer. *Br J Cancer* 84:1013–1021
10. Hearn J, Higginson IJ (1997) Outcome measures in palliative care for advanced cancer patients: a review. *J Public Health Med* 19: 193–199
11. Morris J, Suissa S, Sherwood S, Wright S, Greer D (1986) Last day: a study of the QOL of terminally ill cancer patient. *J Chronic Dis* 34:47–62
12. Cancer pain relief, palliative care (1990) WHO expert committee. WHO, Geneva, p 11
13. Kane RL et al (1984) A randomised controlled trial of the hospice care. *Lancet* 8882:890–894