

Head and neck mucosal squamous cell carcinoma: results of palliative management

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Abstract

Objective: To document the outcome of patients deemed at initial diagnosis to be appropriate for palliative care.

Materials and methods: Over a five-year period, all patients with head and neck mucosal squamous cell carcinoma (HNMSCC) were referred to one consultant surgeon, and data were collated retrospectively.

Results: Of 286 patients with HNMSCC, 60 (21 per cent) were deemed appropriate for palliative care at initial diagnosis. Their median survival was 154 days, with hypopharyngeal and oropharyngeal tumours forming a disproportional percentage of the initial diagnoses ($p < 0.001$). After initial assessment, 66 per cent of patients were discharged to their home, 17 per cent to hospice care and 17 per cent were transferred to other institutions. Including deaths during the initial admission, 29 per cent of patients did not return home after diagnosis. Palliative treatment included operative interventions in 35 per cent and radiotherapy in 43 per cent. Time spent in further hospital care averaged 47 days, and 47 per cent of patients eventually died in hospital.

Conclusion: One in five patients presenting with HNMSCC were deemed appropriate for palliative care at initial presentation and survived less than six months after diagnosis. More than one-third required surgical intervention, and 29 per cent never returned home.

Key words: Head and Neck Neoplasms; Palliative Care; Pharynx

Introduction

Head and neck squamous cell carcinoma constitutes approximately 5 per cent of all cancers.¹ Although there have been many advances in the management of these tumours, the cure rate remains stubbornly stationary.² The majority of clinical literature concerning head and neck squamous cell carcinoma is focused on improving the quality of life and outcome of patients undergoing potentially curative treatments. In contrast, little attention is given in the literature to the natural history and outcome of advanced, incurable disease. An ideal palliative treatment should give symptom relief without producing significant morbidity. There is, however, no consensus as to the best management of patients with advanced head and neck cancer.³ In one of the few papers exclusively addressing palliative care in head and neck cancer patients, Jones⁴ showed that over 15 per cent of 3482 patients with head and neck cancer were deemed appropriate for palliative care at presentation, on the basis of advanced age, poor general condition, and advanced stage of primary tumour, neck node metastases and lymph nodes low in the neck. Kowalski and Carvalho⁵ reported

data from 808 untreated head and neck cancer patients, noting that approximately 50 per cent died within four months of diagnosis. These large studies, however, are based on the accumulated data of many surgeons gathered over several decades. Although the survival of these patients may not vary greatly, their management today may differ, and the conclusions of the above authors may thus not be applicable in the present day.

The objective of this study was to assess a group of patients with incurable head and neck cancer presenting for the first time to one surgeon, with particular emphasis on the natural history and palliative therapy required.

Materials and methods

We identified all patients with a diagnosis of mucosal squamous cell carcinoma of the head and neck who were referred to a single head and neck surgeon (CT) between July 1994 and July 1999. Following a multidisciplinary assessment, patients whose treatment plan intent was non-curative were included. Patients with recurrent tumour, a primary tumour site other than mucosal and metachronous tumours

were excluded (see Table I). A minimal follow up of seven months post-diagnosis was required for inclusion, based on previously published median survival studies of palliative care patients.^{4,5} A detailed chart review and database analysis were undertaken, and additional outcome information was obtained from the patients' primary care physicians, hospices and other institutions where they had been treated.

Results

Over the five-year review period, 286 patients were newly diagnosed with head and neck mucosal squamous cell carcinoma (HNMSCC). Two hundred of these patients were treated with a curative intent. Of the 86 patients not considered for potentially curative treatment following initial assessment, a further 26 patients were excluded by virtue of: recurrent tumour other than primary (11); previous radiotherapy (nine); tumour site unknown (four); and uncertain histology (two).

Overall, 60 patients (21 per cent) were deemed appropriate for palliative care following initial diagnosis. The reasons for instigating palliative care were: advanced disease (39); poor medical condition (13); and refusal of curative treatment (eight) (see Table II).

The average patient age at presentation was 70 years, with a range of 47 to 90 years, [average 63 years (range 20–94 years) for the curative group]. The average duration of reported symptoms prior to presentation was 101 days (range 1–365 days). There were no specific presenting symptoms exclusive to this group; the main symptoms complained of were weight loss (58 per cent), dysphagia (47 per cent), pain (37 per cent) and communication difficulties (27 per cent).

Table III compares the distribution of tumour sites in patients in the palliative and curative groups. Tumours of the hypopharynx and oropharynx predominated in the palliative group, compared with tumours of the oropharynx and larynx in patients treated with curative intent ($p < 0.0001$).

Overall, six patients (10 per cent) died in hospital during the initial admission. Of the remaining 54 patients (90 per cent), 24 were discharged home, six went to hospice care and six were transferred to other local hospitals. Including those who initially died in hospital, a total of 29 per cent of patients never returned to their home residence post-diagnosis.

Palliative treatment, apart from analgesia, included operative interventions (37 per cent of cases), with 10 patients requiring tracheostomy for airway obstruction and 14 requiring percutaneous gastrostomy for nutrition. In addition, 26 patients (43 per cent) received palliative radiotherapy, with a mean radiation dose

of 26 Gray given over an average of 10 fractions. The hazard ratio (risk of mortality) for those receiving palliative radiotherapy was marginally lower than for those who did not. However, this difference was not statistically significant (multiple variable analysis, Cox's proportional hazard test).

By the conclusion of the study, 75 per cent of patients had died with disease. The median survival for the group was 154 days (Kaplan–Meier survival estimate test) (Figure 1). While there was a trend towards women and those without distant metastatic disease at presentation having a lower mortality risk, this difference was not statistically significant (multiple variable analysis, Cox's proportional hazard test). On average, patients spent a total of 47 further days in hospital care following discharge after their initial diagnosis. Forty-seven per cent of patients eventually died in hospital, as opposed to in a hospice or home care setting.

Discussion

Each year, over 5 per cent of all new malignancies affect the head and neck, with the majority being squamous cell carcinoma.¹ Early-stage head and neck cancer has the best chance of cure, usually via surgery, radiotherapy or a combination of both. However, the survival rate for advanced cancer falls to about 35 per cent overall.⁶ On initial presentation, after multidisciplinary assessment, a significant proportion of these patients are not considered suitable candidates for curative management and are treated palliatively on an individual basis.⁴ The World Health Organization defines palliative care as 'the active total care of patients and their families by a multidisciplinary team when the patient's disease is no longer responsive to curative treatment'.⁷ This group of palliative care patients often require intensive management, including control of the airway and nutritional problems, but their management receives little recognition in the literature.⁸

In this present study of 286 patients diagnosed with head and neck cancer over a five-year period, 21 per cent were deemed appropriate for palliative care following initial diagnosis. This percentage is somewhat larger than that reported by Jones,⁴ who retrospectively analysed a database of 3482 patients collected over a period of 30 years and found 539 patients (15.4 per cent) to be unsuitable for radical treatment. The different percentage may be explained by the tumour site distribution in the two studies; nearly half of the patients in Jones's database had primary laryngeal cancers, with an expected earlier presentation and better prognosis.⁴

TABLE I

PATIENT EXCLUSION CRITERIA

Absence of definitive histological diagnosis of SCC
Tumour sites other than mucosal
Previous curative surgery
Previous curative radiotherapy
Tumour recurrence

SCC = squamous cell carcinoma

TABLE II

PALLIATIVE CARE SUBGROUPS

Reason for palliative treatment	Patients (%)
Advanced disease	65
Poor medical status	22
Refusal of curative treatment	13

TABLE III
DISTRIBUTION OF TUMOUR SITES*

Tumour site	Palliative referrals (%)	Curative referrals (%)
Hypopharynx	32	19
Oropharynx	27	8
Oral cavity	17	34
Larynx	10	35
Primary unknown origin	8	2
Sinus	5	1
Nasopharynx	2	1

The average profile of our patients was similar to that published in the literature for this condition. The average age of these palliative therapy patients was older than that of the curative group, and patients suffered a disproportionate number of tumours involving the hypopharynx and oropharynx, in keeping with the findings of other studies.^{4,9} As expected, this study found that the main reason for palliative therapy was patients having tumours too advanced for curative intent. Patients in poor medical condition were the second commonest group, while a third, smaller but significant group were those who refused curative therapy. Such a group was also noted by Kowalski and Carvalho⁵ but not commented on in Jones' report.⁴

For patients with incurable disease, the emphasis changes from possible curative therapy to treatment which will improve quality of life. For our patient population, some of the most important features concerning quality of life were the ability to communicate, breathe unrestricted, swallow and remain pain free. Where possible, it was our policy in treating this patient population to continue oral intake as long as possible. But where dysphagia or aspiration became insurmountable, percutaneous endoscopic gastrostomy (PEG) placement was preferred to nasogastric feeding. Overall, one-quarter of our patients required PEG placement at some point in the course of their care. In contrast, Kowalski and Carvalho⁵ stated that only 3 per cent of their patients were fed by gastrostomy or nasogastric tube, but they

acknowledged that the treatment of the patients included in their retrospective study, collected over 40 years, differed from the current standards of care practised.

Airway concerns led to one-sixth of our patients requiring tracheostomy. This requirement was not commented on by Jones⁴ or Kowalski and Carvalho,⁵ but Talmi *et al.*,¹⁰ who assessed patients with head and neck cancer admitted to a hospice, noted that 15 of their 78 patients required a temporary or permanent tracheostomy.

It is estimated that between 50 and 85 per cent of patients with advanced head and neck cancer have significant pain.⁸ Our findings were similar, and the palliative care team were involved routinely at an early stage in the management of our patient cohort.

In the present study, 43 per cent of patients received palliative radiotherapy, as classified by the radiotherapist involved, with the dosage and length of time of treatment varying considerably between patients. The main indication was symptom relief, particularly better pain relief. For these patients, there was no demonstrable, statistically significant survival advantage in those receiving radiotherapy, and the impact of palliative radiotherapy on quality of life was difficult to assess retrospectively. Similarly, of 539 palliative care patients in Jones' study,⁴ 201 received some form of substantive palliative treatment, with the aim of prolonging life or relieving discomfort. This included 104 patients who received palliative radiotherapy and 97 patients who received chemotherapy. In a review of the literature, Hodson *et al.*¹¹ commented that the role of radiotherapy in the palliation of patients with advanced cancer of the head and neck was not clear and that the currently available literature did not address the toxicity or appropriate dose and fractionation of palliative radiotherapy.

Whenever possible, it is our policy that palliative care patients be able to spend the majority of their time at home, with hospital care kept to a minimum, as stressed by Fortunato and Ridge.¹² Despite this, over one-quarter of patients never returned home after their initial diagnosis, while, of those initially discharged, nearly half eventually died in a hospital setting. Many patients required further intervention, even after discharge, with the typical patient treated on a palliative basis spending on average a further 47 days in hospital; this constituted over 30 per cent of these patients' remaining life expectancy. This aspect of care is poorly recognized in the literature. In one study, Shedd *et al.*¹³ reported on 60 patients

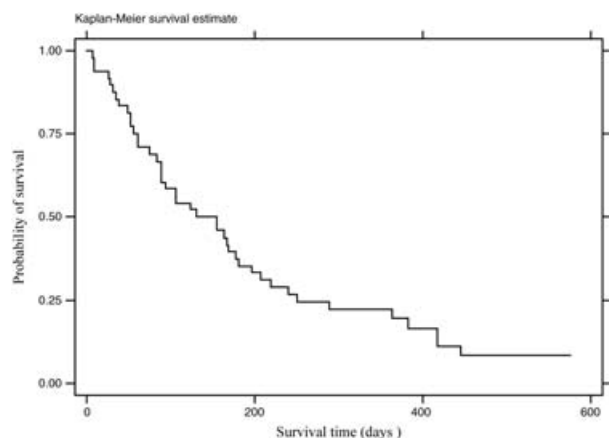


FIG. 1

Kaplan–Meier survival estimate for palliative care patients with head and neck cancer.

who were terminally ill with head and neck cancer, for whom the mean time of hospitalization was four months, with 86 per cent of patients dying in a hospital setting. As one would expect, the patient survival time in this study was poor, with a median survival of 154 days. This is comparable to the median survival rates reported by Jones⁴ (five months) and Kowalski and Carvalho (3.8 months).⁵

Conclusion

In this study, palliative care patients with head and neck cancer survived on average five months after initial diagnosis. Including deaths during the initial admission, more than one-quarter of patients did not return home after diagnosis. Of those patients discharged from hospital, a significant proportion of their life expectancy was spent in further hospitalization. Because of the site and nature of their tumours, these patients commonly require intensive therapy to allow adequate nutrition, airway patency and pain relief. Surgical interventions, such as tracheostomy and PEG, together with radiotherapy, were often required, despite the limited prognosis, to relieve distressing symptoms prior to death.

- **20 per cent of patients presenting with head and neck cancer are appropriate for palliative care**
- **Hypopharyngeal and oropharyngeal cancers form a disproportional percentage of these patients' tumours**
- **These patients survived less than six months after diagnosis**
- **Over one-third of these patients required palliative surgical treatment**

Acknowledgement

We thank Dr Allen Kelly, Lecturer in Biostatistics, Trinity College Dublin, for his assistance with statistical analysis and interpretation.

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Mr C Timon takes responsibility for the integrity of the content of the paper.

Competing interests: None declared
