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RESEARCH ARTICLE

Assessing Feasibility of Using Quality of Life Questionnaire in Head and Neck Cancer Patients Undergoing Palliative Radiation Therapy

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Abstract

Objective: Advanced head and neck cancer patients have distressing symptoms and bad prognosis. They have very limited treatment options. Radiation therapy in palliative intent appears to decrease symptoms. But there are limited data on palliative radiation therapy in relation to quality of life. **Materials and methods:** We conducted a pilot study to assess the feasibility of using quality of life questionnaire in patients undergoing palliative radiation therapy. Advanced head and neck cancer patients who are deemed incurable were recruited. **Results:** Out of 15 patients, 9 were males and 6 were females. 6 patients were in 51-60 years age group followed by 3 patients in 61-70 years age group. Significant improvement was seen in the physical domain at the end of radiotherapy course. Only 8 patients completed the questionnaire at 4, 8 and 12 weeks. 5 patients skipped the scheduled follow ups occassionally. **Conclusion:** There is a urgent need to devise a simple and validated tool for prognostication and to improve the quality of life. Intent of treating these patients should be according to patient directed goal of care.

Keywords: Palliative radiotherapy- quality of life- head and neck cancer- patient reported outcomes

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Introduction

Head and neck cancer is prevalent in India and is in increasing trend [1]. Chewing tobacco and alcohol are significant risk factors for head and neck malignancy [2,3]. There is fear of increase in numbers due to increasing use among adolescents and females.

Advanced head and neck cancer patients form a significant proportion for treatment in cancer clinics [4]. Generally these patients have poor performance status and diminished quality of life due to symptoms [5]. Treatment options are little.

Radiation therapy plays significant role in curative intent. But, as palliation, there are skepticism to deliver hypofractionation in head and neck cancer patients [6]. There are doubts about its effectiveness in symptom relief and fear of toxicity [7].

There are multiple studies regarding quality of life in curative intent [8]. There are only few studies regarding quality of life assessment in palliative setting. There are practical problems in assessing quality of life with these set of patients.

We tried to assess the feasibility of using quality of life outcome using questionnaire for patients undergoing palliative radiation therapy using symptom assessment scale and FACT-G questionnaire.

Objectives

To assess the feasibility of using quality of life assessment of advanced head and neck cancer patients.

To evaluate the acute toxicity of this schedule.

Materials and Methods

This is a prospective pilot study. Patients are recruited from our radiation oncology outpatient department. Study period is from April 2021 to August 2021. Those patients who are deemed to be incurable are recruited. All the

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patients are planned for 30 Gy in 5 fractions, weekly twice, with conformal radiation therapy (3DCRT). Only gross disease either primary and/or node is treated. Clinical target volume was 1 cm margin to primary and 0.5 cm to node. Planning target volume was 0.3 cm. Low risk or prophylactic areas are not treated. There is no concurrent chemotherapy to be administered. Spinal cord dose is kept below 24 Gy.

Tumor response is assessed clinically. Acute toxicities is noted using RTOG grading. Pretreatment symptoms is evaluated using symptom assessment scale (11 point numeric scale). Quality of life is assessed with FACT-G questionnaire measuring 4 domains like physical, social, emotional and functional well- being.

Inclusion criteria

All patients diagnosed with primary squamous cell carcinoma of head and neck cancer who are deemed unresecetable or incurable due to age, stage or performance status.

Exclusion criteria

Patients diagnosed to have primary from nasopharynx and sino-nasal region.

Those patients presenting with active bleeding and/ or malignant fistula.

After obtaining the clearance from Institutional ethics committee, study was started.

Results

Out of 15 patients, 9 were males and 6 were females. 6 patients were in 51-60 years age group followed by 3 patients in 61-70 years age group. 5 patients had primary in oral cavity. 4 patients had primary in larynx. 3 patients each in oropharynx and hypopharynx as primary. 8 patients presented with T4 and 7 patients presented with T3. 3 patients presented with N3 disease. 8 patients presented with stage IV A. 4 patients presented with stage IV B.

During the follow up, 8 patients had partial response. 4 patients had stable disease. One patient had disease progression. Disease status was unable to assess in two patients. 3 patients had grade 3 mucositis while 9 patients had grade 2 mucositis. 1 patient had grade 3 dermatitis. 10 patients had grade 2 dermatitis. 4 patients had grade 3 pharyngitis. 8 patients had grade 2 pharyngitis.

Significant improvement was seen in the physical domain comparing with (or compared to) the remaining three domains (social, emotional and functional) at the end of radiotherapy course. Regarding symptom assessment, more than 50 percent improvement was seen in 9 patients. 5 patients reported to have improvement less than 50 percent. One patient reported worsening of symptoms post treatment.

8 patients completed the questionnaire at 4, 8 and 12 weeks. 5 patients skipped the scheduled follow ups occassionally. 2 patients did not turn up for follow ups. Despite attempts at telephoning them, it was difficult to contact the patients and assess the well being.

Discussion

Palliation is defined as relief of symptoms and suffering caused by cancer and other life threatening diseases. But it does not involve curing the disease [9].

World health organization defined quality of life as the 'individuals perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns'[10].

Quality of life depends on the function of critical structures in head and neck. Malignancy of head and neck has symptoms involving critical structures, thereby having negative impact on quality of life.

Radiation therapy in curative doses leads to significant toxicity and further negatively impacts the quality of life of incurable patients. Incurable head and neck cancer patients have limited survival [11]. Prognostifying patients in an incurable setting is a difficult task. There are no strict criteria to identify the patients [12].

Palliative radiotherapy is one of the treatment options to reduce the symptoms of these patients. Radiotherapy is an effective tool to decrease symptoms [13]. It can reduce pain, decrease anxiety and depression [14]. There are multiple regimens available in the literature. There are no guidelines to recommend or prescribe a particular regimen [15]. Intent and regimen to treat is mostly based on physician discretion.

In curative settings, quality of life assessment studies showed that there is drop in quality life post treatment (surgery, radiation and chemotherapy or combined) [16].

In palliative settings, there are only few studies regarding quality of life assessment. Outcomes are mostly based on clinical response, symptom assessment and questionnaires. Patient reported outcomes are key to evaluate quality of life [11].

Practical problem with questionnaire assessment with these patients are during follow ups. These patients are prone to miss checkups due to deterioration of health. In our study, only 8 patients (53%) turned up for follow up visits. There are chances of missing data which gives us wrong interpretation [11]. Murthy et al reported significant attrition rate in their study [14].

There are no proper tools available to measure the outcome of palliative radiotherapy nor to guide.

Limitations

Recruitment was low because of covid pandemic second wave. In view of very small numbers, survival data or toxicity could not be commented.

In conclusion, there is a urgent need to devise a simple and validated tool for prognostication and to improve the quality of life. Intent of treating these patients should be according to patient directed goal of care. Involving palliative care services early to these patients has significant impact on quality of life.

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