



Quality of Life in Patients of Head and Neck Cancer During Covid 19

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Abstract The Indian Institute of head and neck oncology, a charitable Cancer Centre under the Indore Cancer foundation, continued to offer treatment during the Covid pandemic. 44 head and neck cancer patients who underwent surgery with adjuvant radiotherapy and 43 head and neck cancer patients who underwent only radiotherapy as the primary line of treatment from March 2020 to May 2021, were selected for the purpose of this study. Patients who underwent treatment for head and neck cancer either by radiotherapy or by surgery followed by post-operative radiotherapy were analysed to evaluate quality of life. Feedback was obtained using a QOL questionnaire. The results were analysed against numerical scores. Pain, appearance, speech, swallowing, chewing taste sensation etc. were analysed. Fear and psychological discomfort remained the overriding aspect.

Keywords Quality of life · Head and neck cancer · Covid 19

Introduction

Head and neck cancers constitute a third of the cancer burden in India. Socioeconomic constraints, large patient population, scarcity of trained health workers, and inadequate infrastructure are major challenges faced in the management of these cancers [1].

The Indian Institute of Head and Neck Oncology is a not-for-profit, charitable cancer facility situated in a village 15 km from the central Indian city of Indore. The centre is unique in that it has been developed to address the issue of India's commonest cancers in men: head and neck cancers [2].

The Covid pandemic has shaken the world, so as to say, upside down. To help patients in the Covid times we brought out a booklet, in Hindi, on what are the precautions as well as what is it that the patient should know about treatment of cancer during the pandemic. It was made available on the virtual platform at the website of the Indore Cancer foundation. More recently we have brought out a mobile cancer health education app available on smartphones in Hindi, the 'cancer sanket', to educate the user within the safe confines of their home on the warning signs of cancer. With 700 million internet users and 600 million smart phone users in India, growing at a rate of 25 million per quarter [3], we plan multi lingual translation of this app which was developed to meet the challenge thrown by the pandemic.

Materials and Methods

The Quality of Life Scale (QOLS) was created originally by American psychologist John Flanagan in the 1970's, and has been adapted for use in chronic illness groups [4].

44 head and neck cancer patients who underwent surgery with adjuvant radiotherapy and 43 head and neck cancer patients who underwent only radiotherapy as the primary line of treatment during covid19 pandemic from March 2020 to May 2021, were selected for the purpose of this study and requested to answer a comprehensive questionnaire that was prepared looking at all the key

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functions that were likely to be impacted by treatment. One patient who underwent a total laryngectomy was excluded and is not a part of this study.

A systematic telephone interview was preceded by in-house discussion with the patient care staff. Patients were counselled that inputs provided by them will help us draw guidelines and serve them better. Inputs provided by them were scored.

QOL Questionnaire

| | | | |
|-----------|---------------|----------------------|-------------|
| 1. Pain | 2. Appearance | 3. Swallowing | 4. Chewing |
| 5. Speech | 6. Taste | 7. Shoulder movement | 8. Activity |

| | |
|--|--|
| No pain. (100) | There is mild pain not needing medication (75) |
| There is no change in my appearance. (100) | The change in my appearance is minor. (75) |
| I can swallow as well as ever. (100) | I cannot swallow certain solid foods. (70) |
| I can chew as well as ever. (100) | I can eat soft solids but cannot chew some foods. (50) |
| My speech is the same as always. (100) | I have difficulty saying some words. (70) |
| I can taste food normally. (100) | I can taste most foods normally. (70) |
| I have no problem with my shoulder. (100) | My shoulder is stiff but it has not affected my activity or strength. (70) |
| I am as active as I have ever been. (100) | There are times when I can't keep up my old pace, but not often. (75) |

| | |
|--|--|
| Moderate pain—requires regular medication (e.g. paracetamol) (50) | Severe pain controlled only by prescription medicine (e.g. morphine). (25) |
| My appearance bothers me but I remain active. (50) | I feel significantly disfigured and limit my activities due to my appearance. (25) |
| I can only swallow liquid food. (30) | I cannot swallow because it “goes down the wrong way” and chokes me. (0) |
| I cannot even chew soft solids. (0) | I cannot be understood. (0) |
| Only my family and friends can understand me. (30) | I cannot taste any food. (0) |
| I can taste some foods. (30) | I cannot work due to problems with my shoulder. (0) |
| Pain or weakness in my shoulder has caused me to change my work. (30) | I don't go out because I don't have the strength. (25) |
| I am often tired and have slowed down my activities although I still get out. (50) | Severe pain, not controlled by medication. (0) |
| | I cannot be with people due to my appearance. (0) |

*Part of this QOL questionnaire has been taken from University of Washington Quality of Life Questionnaire(UW-QOL)

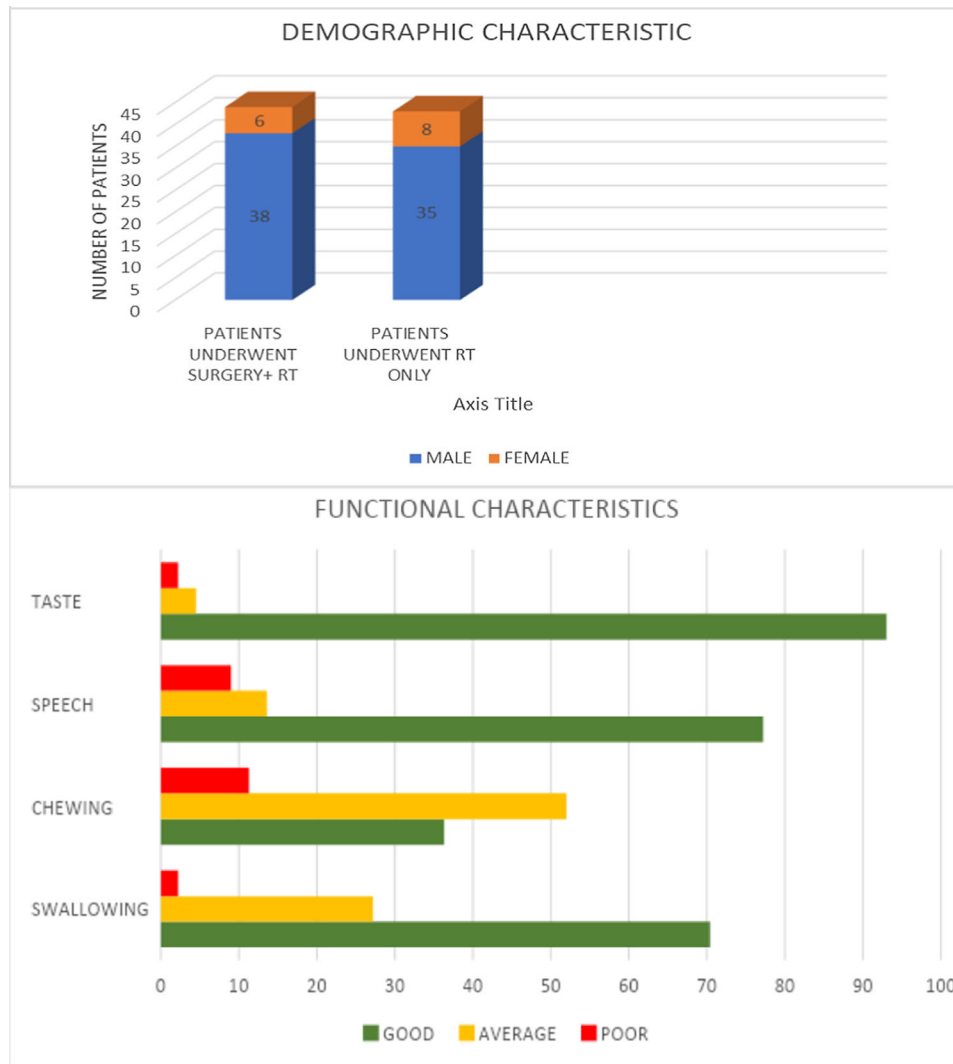
Details:

Out of 44 patients of surgery with RT, 38 patients were male and 6 patients were female. Out of 43 patients of radiotherapy, 35 patients were male and 8 were females. Their age ranged from 33 to 75 years. 12 patients out of total 87 patients had comorbidities like hypertension, diabetes mellitus, epilepsy.

Of the total evaluated 58 patients out of 87 were tobacco users in some form or the other.

Radiation was offered with fractions of five days a week for 5 weeks.

| Surgical procedure | Number of cases |
|---|-----------------|
| COMMANDO followed by reconstruction | 11 |
| Wide local excision with modified radical neck dissection | 14 |
| Hemiglossectomy | 4 |
| Partial glossectomy | 10 |
| Partial Maxillectomy followed by reconstruction | 4 |
| Total maxillectomy followed by reconstruction | 1 |



Functional Characteristics

| Functional characteristics | Results | | | | | |
|----------------------------|--------------------------------|------------|------------------------------|------------|--------------------------|----------|
| | Good For score (100, 75/70) | | Average For score (50,30) | | Poor For score (zero) | |
| | A | B | A | B | A | B |
| Swallowing | 31 (70.4%) | 37 (86.0%) | 12 (27%) | 25 (58.1%) | 1 (2.2%) | 0 (0%) |
| Chewing | 16 (36.3%) | 31 (72.0%) | 23 (52.2%) | 11 (25.5%) | 5 (11.3%) | 1 (2.3%) |
| Speech | 34 (77.2%) | 35 (81.4%) | 6 (13.6%) | 6 (13.9%) | 4 (9.0%) | 2 (4.6%) |
| TASTE | 41 (93.2%) | 43 (100%) | 2 (4.5%) | 0 (0%) | 1(2.2%) | 0 (0%) |

A = group A = patients undergone surgery + RT

B = group B = patients undergone only Radiotherapy

Subjective Characteristics

| Subjective characteristics | Results | | | | | |
|----------------------------|-------------------------|-------------|---------------------------|-----------|-----------------------|-----------|
| | Good for score (100,70) | | Average For score (50,30) | | Poor For score (zero) | |
| | A | B | A | B | A | B |
| Appearance | 44 (100%) | 39 (90.69%) | 0 (0%) | 4 (9.30%) | 0 (0%) | 0 (0%) |
| Shoulder movement | 39 (88.6%) | 43 (100%) | 3 (6.81%) | 0 (0%) | 2 (4.54%) | 0 (0%) |
| Activity | 41 (93.18%) | 38 (88.37%) | 2 (4.54%) | 4 (9.30%) | 1 (2.27%) | 1 (2.27%) |

A = group A = patients undergone surgery + RT

B = group B = patients undergone only Radiotherapy

Psychosocial discomfort

| Psychosocial discomfort | Results (among all 87 patients) | | |
|---|---------------------------------|-------------|-----------|
| | Yes | No | Can't say |
| Fear and comprehension during covid to reach hospital/doctor? | 84 (96.55%) | 0 (0%) | 3 (3.44%) |
| Difficulty in reaching hospital/doctor amid lockdown? | 73 (83.90%) | 12 (13.79%) | 2 (2.29%) |
| Post-op difficulty encountered for regular follow-up and appointment? | 80 (91.95%) | 7 (8.04%) | 1 (0%) |

Results

QoL seems to be associated with gender (female patients obtained worse scores in most of the functional scales), age (patients < 65 years scored better), tumor location (oropharyngeal tumors showed worse) and tumor staging (early stages obtained better scores than advances ones). Many patients with oral and oropharyngeal cancer show poor QoL before initiating treatment.

Quality of life in patients with oral and oropharyngeal cancer☆

In this study we have included swallowing, chewing, speech, taste, appearance pain and psychological discomfort.

(i) Surgery with radiation

At the time of survey, out of 44 patients of surgery followed by radiation 12 patients (27.2%) had difficulty in swallowing and 1 patient (2.27%) could not swallow.23 patients (52.27%) had difficulty in chewing and 5 patients (11.36%) could not chew solid food.

Six patients (13.6%) had difficulty in speech and 4 patients (9.09%) had speech difficulty at the time of survey.2 patients (4.5%) had reduced taste sensation and 1 patient (2.27%) could not taste food.

Vis a Vis appearance, for resections that warranted reconstruction, pre-operative telephone consultations had been done and outcomes explained, as a result, in this small number of patients cohort appearances of the patients did not cause distress and limit their interactions.

3 patients (6.81%) had difficulty in shoulder movement and 2 patients (4.54%) could not work due to pain in their shoulders,for some time. Physiotherapy was given by online consultation or video demonstration as the physiotherapy services remained closed during the peak of pandemic.

(ii) Only radiation

Out of 43 patients of radiation 25 patients (58.13%) had difficulty in swallowing, 11 patients (25.58%) had difficulty in chewing and 1 patient (2.32%) could not chew. 6 patients (13.9%) had difficulty in speech and 2 patients (4.65%) could not speak,due to radiation induced oedema.Speech therapy services remained closed.

Discussion

Diagnosis of cancer causes physical and emotional challenges. Cancer is anyway challenging to the patients, family and doctors. With addition of Covid, it became more challenging with lack of resources, facilities and uncertainty but team work of institution and patient motivation played crucial role in combating these obstacles.

Vis a Vis symptoms, head and neck cancer patients face multidimensional problems right from the diagnosis through the treatment. It is imperative every patient is aware of all consequences of choosing whatever treatment he/she is offered. It improves their ability to cope better. Each modality has its side effects but the ultimate goal is improved quality of life. Once the direct medical care is minimised, the end point is effective self-care strategies.

Most of the symptoms in this study are on expected lines with regards to radiotherapy and surgery. With time, there was improvement. The challenge was offering symptom control during the peak of pandemic. While symptoms were managed by telemedicine and on line consultation, the emotional domain showed the greatest preponderance while pain was the most remarkable symptom variable.

Quality of life represents subjective perception of the patient. It is a core issue as a measure of treatment outcomes, and includes physical, psychological, social, spiritual areas a reflection of multidimensional perceptions. In view of multiple functionality measuring of QOL is difficult, challenging and complex, particularly during the pandemic and often requiring a teamwork clusters to try and retry for assessment. To begin with a step wise plan of action was put in place to conduct this study despite constraints of furloughed working in times of pandemic during its early deadly phase.

The purpose of this study was to assess the quality of life of head and neck cancer patients treated during the Covid

19 pandemic at the Indian Institute of Head and Neck Oncology from a period of March 2020 to May 2021.

Most of the health related issues were attended by doctors on phone and through on line consultations. Based on anatomical location and the modalities of treatment cancers in these regions can have Impact on functions. Maximum number of patients have psychological discomfort during covid times, fear and difficulty in reaching the hospitals and doctors. As a follow up of this outcome we have instituted the services of psycho oncologist and now have a counsellor aboard as well. As the Omicron variant still remains preponderant, their role remains crucial.

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