

Original Research Article


# Comparison of Quality of Life in Oral Cancer Patients following Surgery vs Radiotherapy

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## Abstract

**Background:** Oral cancer being one of the most common malignancies in the low-income group in India. It usually presents in an advanced stage limiting treatment options. The mainstays of treatment being surgery and radiotherapy both being lifestyle changing procedures.

**Aims and objectives:** The purpose of this study is to evaluate the quality of life for oral cancer survivors after surgery in comparison with radiotherapy using ICF questionnaire

**Materials and methods:** Oral cancer patients who underwent surgery (25 patients) and Radiotherapy (25 patients) in Stanley medical college for stage 1 and stage 2 lesions of oral carcinoma for past 3 Years (2013-2015) were enrolled.

**Results:** The study showed that surgery as primary therapy provided a better quality of life than radiotherapy alone in the treatment of oral cancer patients.

**Conclusion:** After comparing the results primary surgery for oral malignancy seems to be the treatment of choice as long as the tumor is amenable to surgical resection. Radiotherapy though resulting in a lower quality of life is very efficacious for unresectable tumors.

## Key words

Oral cavity cancer, CA oral cavity, Quality of life, Surgery, Radiotherapy.

## Introduction

Oral cancer is a major neoplasm worldwide and accounts for most head and neck cancers. It

theoretically should be largely preventable or detectable at an early stage. Approximately 90% of oral cancers are SCC, which is seen typically

on the lateral border of the tongue, oropharynx, and floor of the mouth, as erythroplakia, leukoplakia, or a mix of the two (erythroleukoplakia) with an ulcer.

Early oral cancer is asymptomatic, which contributes to delayed diagnosis. Any single ulcerated lesion persisting for more than 3 weeks should be regarded with suspicion, and a biopsy should be performed.

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OSCC is particularly common in the developing world, mostly in older males. There is concern about an ongoing increase in younger patients and in women, as well as in the oropharynx, possible due to human papillomavirus (HPV) infection. The aetiology of OSCC appears to be multifactorial and strongly related to lifestyle, mostly habits and diet (particularly tobacco alone or in combination with betel, and alcohol use). Other factors such as infective agents may also be implicated, particularly in oropharyngeal cancer (HPV). Immune defects or immunosuppression, defects of carcinogen metabolism, or defects in DNA-repair enzymes underlie some cases of SCC. Sunlight exposure predisposes to lip cancer.

Findings from the history and clinical examination by a trained dentist are the primary indicators of OSCC, but the diagnosis must always be confirmed histologically with tissue biopsies, even if the clinical picture is consistent with OSCC.

## **Aim**

- To evaluate the quality of life in oral cancer patients following surgery and compare it with those receiving radiotherapy.

## **Materials and methods**

50 oral cancer patients who underwent surgery (25 patients) and RT (25 patients) in Stanley Medical College for stage 1 and stage 2 lesions of oral carcinoma for past 3 years (2013-2015) were selected. Their quality of life assessment was done using the WHO Adopted International Classification of Functioning, Disability and Health (ICF) Questionnaire.

The ICF comprises of 4 sections. They are

**Section 1:** comprises of problems with parts of the body.

**Section 2:** comprises of problems with activity and social functioning.

**Section 3:** deals with problems with the environment.

**Section 4:** deals with general state of health

**Sample size:** 50

## **Results**

**Table - 1** just gives the average age distribution among the 50 subjects, wherein the highest distribution lies in 51 to 60 years of age while the lowest is in 31 to 40 years of age and the number of male patients outnumber their female counterparts by a huge margin in each of the 5 age groups.

**Table - 1:** Age distribution.

Age group (Years)	No. of patients	Male	Female
31-40	4	4	0
41-50	11	9	2
51-60	16	13	3
61-70	12	10	3
71-80	7	5	2

The maximum number of patients under surgical modality lies in 51 to 60 years of age. Here again the age distribution takes a bell shaped curve (**Table – 2**).

Only one patient in the age group of 31 to 40 was given radiotherapy for oral malignancy. Maximum number of patients in this table lies in 51 to 60 years of age (**Table – 3**).

**Table - 2:** Age distribution in surgical treatment modality.

Age group (Years)	No. of patients
31-40	2
41-50	7
51-60	8
61-70	5
71-80	3

**Table - 3:** Age distribution in Radiotherapy.

Age group (Years)	No. of patients
31-40	2
41-50	4
51-60	8
61-70	7
71-80	4

**Table - 4** compares the number of patients under surgery and radiotherapy who feel they have problems with their body parts. The table says most of the patients taking radiotherapy are worried about their body parts while only half the patients who had undergone surgery feel so.

**Table - 4:** No. of patients with problems with parts of body.

Age group (Years)	Surgery		Radiotherapy	
	No. of patients	%	No. of patients	%
31-40	1	50	2	100
41-50	3	42.85	3	75
51-60	4	50	5	62.5
61-70	3	60	6	89.82
71-80	2	66.66	4	100

Almost 70% of patients taking radiotherapy find problems with activity and functioning. But only 55% of patients who had undergone surgery find problems with activity and functioning. Though the difference is not so huge, it is not insignificant (**Table - 5**).

**Table - 6** relates the number of patients under surgical and radiotherapy treatment modalities with problems with their environment. There is not much of a difference between the two sets of

patients under this particular criterion. Half the study patients feel they have problems with their environment irrespective of what treatment modality they get.

**Table - 5:** No. of patients with problems with activity and functioning.

Age group (Years)	Surgery		Radiotherapy	
	No. of patients	%	No. of patients	%
31-40	1	50	1	50
41-50	4	57.14	2	50
51-60	3	37.5	6	66.66
61-70	3	60	3	37.5
71-80	2	66.66	3	75

**Table - 6:** No. of patients with problems with environment.

Age group (Years)	Surgery		Radiotherapy	
	No. of patients	%	No. of patients	%
31-40	2	100	2	100
41-50	4	57.14	2	50
51-60	4	50	4	50
61-70	2	60	3	37.5
71-80	2	66.66	2	50

Here the number of patients in both groups who feel they have problems with the general state of health are being compared. Here again many of the radiotherapy patients feel they are not happy with their general state of health (**Table - 7**).

**Table - 7:** Age distribution with problems with general state of health.

Age group (Years)	Surgery		Radiotherapy	
	No. of patients	%	No. of patients	%
31-40	1	50	2	100
41-50	5	71.42	3	75
51-60	5	62.5	6	66.66
61-70	4	80	6	93.98
71-80	2	66.66	3	75

## Discussion

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The objective of our study was to evaluate and compare the Quality of life in patients who had undergone surgery with those who receive radiotherapy. The entire study spins around the four main sections namely problems with parts of body, with activity and functioning, with environment and with general state of health.

The results in our study compares favourably with studies by Bernier, et al. [1] who compared postoperative RT with preoperative RT alone for treatment of Oral malignancies.

It shows similar results with the studies by Brizel, et al. [2, 3] who studied the complications of radiotherapy for head and neck cancers with different agents.

The study by Wang, et al. showed the advances made by novel radiotherapy methods can raise quality of life to levels achieved by surgery [5].

Studies by Byers, et al.; Pernot, et al. and Mendenhall, et al. showed that radiotherapy was as effective as primary surgery for Oral malignancies. These studies did not show much difference in quality of life between the two [4, 6-9].

## Conclusion

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After comparing the results primary surgery for oral malignancy seems to be the treatment of choice as long as the tumor is amenable to surgical resection. Radiotherapy though resulting in a lower quality of life is very efficacious for unresectable tumors.

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