



Assessment of life expectancy in oral cancer patient- Role of holistic approach

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ABSTRACT

Background: Oral cancer is a significant health concern worldwide, and its prognosis heavily depends on various factors, including the patient's clinical status, tumor characteristics, and treatment modalities. The present study evaluated the essential components associated with longevity and quality of life in oral cancer patients.

Material & Methods: The present study included 30 diagnosed cases of oral squamous cell carcinoma (OSCC) who underwent complete surgical therapy, radiation therapy, or both. All the selected cases were divided into two groups. Fourteen patients (without a holistic approach, WOHA) had not opted for the Cancer Care program, and 16 patients (with a holistic approach, WHA) had opted for the Cancer Care program. Patient life expectancy was assessed in patients with or without holistic treatment. The obtained data was sent for descriptive analysis.

Results: The data analysis showed that the mean age of patients in the WOHA group was 45.3±9.9 years, while in the WHA group, it was 47.43±10.3 years. The average life of patients in the WOHA group was 52.5±23 months; in the WHA group, it was 60.1±25.3 months. The holistic parameters, such as yoga, spiritual, and emotional support, individually showed an increased lifespan.

Conclusion: The holistic treatment approach in patients with oral and pharyngeal carcinoma directs to improve the patient's quality of life and overall well-being, which may lead to increased survival rates.

Keywords: *Survival rate, Oral Squamous Cell Carcinoma, Holistic approach, Quality of life*

INTRODUCTION

Oral cancer is a significant health concern worldwide, and its prognosis heavily depends on various factors, including the patient's clinical status, tumor characteristics, and treatment modalities. In recent years, a holistic approach has been advocated for the management of oral cancer patients, emphasizing a comprehensive evaluation of the patient's physical, mental, and societal satisfaction. Head and neck cancer (H&N) treatments can result in a number of issues such as dysfunction, disfigurement, and disability. Despite having the best care, up to 50% of patients will not live beyond five years. Patients who do not survive beyond five years are also at risk of secondary tumors along with local and distant metastasis.[1] The extent to which different treatment combinations affect the quality of life and life expectancy of individuals with head and neck cancer after the initial phase has not been extensively documented. It is well known that conventional head and neck radiotherapy with or without combination chemotherapy has acute toxic effects, including radiation dermatitis, mucositis, malnutrition, dehydration, weight loss, pain, and xerostomia. Persistent or delayed adverse reactions may also include xerostomia, weight loss, dysphonia, dysphagia, and ototoxicity.[2] Radiotherapy and surgical treatment of head and neck cancer often lead to long-term functional and structural impairment. These obstacles hinder local and regional disease control. Unfortunately, local and focal recurrences of this disease are the leading cause of death in the population. In addition to the physical morbidity and treatment associated with head and neck cancer, quality of life is compromised.[3] Conventional, regular medical follow-up often fails to meet the need for supportive care. It is common to feel abandoned during the transition from being a patient to a survivor. Survivors are defined as "someone who is living with or beyond cancer," who have completed initial cancer management and don't appear to have active cancer, those living with progressive diseases who are receiving cancer treatment but not in terminal phases of illness, and those who have previously had cancer are included in this category.[4] Patient quality of life (QoL) can be measured by incorporating the ability to perform daily activities in relation to the patient's physical, mental, and societal satisfaction. Patient contentment with their level of functionality should also take into the

consideration. Without a doubt, most Stage III cancer studies presently use QoL endpoints in addition to the standard locoregional control and survival results. The collection of QoL information on a schedule is of auxiliary or indeed scholarly interest instead of practical clinical value.

Number of questionnaire has been utilized for the appraisal of the quality of life (QoL) in patients treated with oral and pharyngeal cancers. Literature study showed that despite of having a potential value, questionnaire are rarely used in routine clinical practice.[5] Quality of life may also be related to the level of individual fulfillment in relationships (family, love, and social life).[6] QoL may be a subjective appraisal of the effect of a condition or treatment on a patient's life, encompassing their physical, mental, social, and functional satisfaction.[5] In spite of the advancements in demonstrative screening hardware, operative strategies, and postoperative care, there are still a significant number of patients diagnosed with advanced-stage oral cancer and having a high mortality rates. In this study, we analyze the essential components related to the longevity and well being of oral cancer patients and evaluate these variables as a holistic approach to increasing life expectancy after oral cancer treatment.

MATERIAL & METHODS

The present study included 30 diagnosed cases of oral squamous cell carcinoma (OSCC). All of the cases completed treatment processes, including surgery or radiotherapy, or combined treatment at the institutional level. They were further advised to participate in the Cancer Care program run by the Medical Foundation in Dhule, Maharashtra. The cases have been selected from the archives of the Department of Oral Surgery during 2011-2018, and data were obtained from the foundation records after obtaining consent from the family member of the deceased. The study population is divided into two groups: one who opted for the holistic treatment program provided by the foundation, and the other who did not select the program. The study followed the protocol of the Declaration of Helsinki and was approved by the Board of Research Committee of the Institute (Ref. no: EC/NEW/INST/2022/2959/021).

Inclusion criteria

- 1- Confirmed diagnosed cases of oral squamous cell carcinoma.
- 2- Patients had completed the treatment process as prescribed.
- 3- The follow-up period for the patients were more than 60 months or until the patient was alive.

Study Design

All the selected cases were divided into two groups. Fourteen patients (without a holistic approach, WOHA) had not opted for the CANCER CARE program but had a complete follow-up period, and 16 patients (with a holistic approach, WHA) had opted for the CANCER CARE program. The CANCER CARE program provides yoga, meditation (spiritual), and emotional and social support after the completion of treatment for OSCC. Patient life expectancy was assessed in patients with or without holistic treatment. The CANCER CARE program was functional for 45 days every six months. Both groups of the study were also provided with the QoL modified questionnaire version II-Indian scenario, designed and validated by Vidhubala et al. (2011).[7] A total 41 questions were included in the questionnaire; 39 questions were rated on 4 point scale with options “not at all “to “very much”. Response for question no 40 & 41 rated from “very poor” to “excellent” in last 15 days. The scores were calculated and categorized into five levels-

- Very high QoL (>165)
- High QoL (147-165)
- Average QoL (118-146)
- Low QoL (99-117)
- Very Low QoL (<99)

Statistical Analysis

The obtained data was sent for descriptive analysis to study significant changes in the lifespan of patients after holistic treatment by the CANCER CARE program.

RESULTS

The data analysis showed that the mean age of patients in the WOHA group was 45.3±9.9 years, while in the WHA group, it was 47.43±10.3 years. The overall average age was 46 ± 10.42 years. Table 1 depicts the descriptive analysis of patients in the group without a holistic approach, while Table 2 explains the descriptive analysis of patients in the group with a holistic approach. The average life of patients in the WOHA group was 52.5±23 months, and in the WHA group, it was 60.1±25.3 months (Graph 3). Descriptive analysis showed that the maximum number of patients underwent combined treatment therapy, other than surgery and radiotherapy, in both groups. Although the maximum number of patients were in clinical stages 1 and 2 (Graph 1). The holistic parameters, such as yoga, spirituality, and emotional well-being, individually showed an increase in lifespan, as shown in Graph 2. The lifespan of cases at different clinical stages of OSCC is shown in Graph 4. Stage 1 patient showed 58 months of life without having holistic treatment, and 75 months with a holistic approach. A similar increase in lifespan was seen at all stages of OSCC. Analysis with independent T test between two groups showed a non-significant association due to the less obtained sample size.(Table 3). The average QoL score was found to be higher in study group with holistic approach treatment. (Graph 5)

TABLE 1: Descriptive analysis of data in study group without holistic approach

Without Holistic Approach (WOHA)									
Stage Of Oscc	No. Of Patients	Age (Years)	Surgery	Radioterapy	Combi ned	Local	Region al	Metast asis	Life avg (months)
1	6	42	2	2	2	6	0	0	58
2	5	45	1	1	3	5	0	0	57
3	2	61	0	1	1	0	2	0	20
4	1	58	0	0	1	0	0	1	12

TABLE 2: Descriptive analysis of data in study group with holistic approach

With Holistic Approach (WHA)									
STAGE of OSCC	No. of Patients	AGE (Years)	Surgery	Radiotherapy	Combined	Local	Regional	Metastasis	Life avg (months)
1	6	46	2	2	2	6	0	0	75
2	6	45	2	2	2	6	0	0	71
3	2	36	1	0	1	0	2	0	25
4	2	66	0	0	2	0	1	1	14

TABLE 3: Statistical analysis of average life span in of both study groups

Independent “T” Test				
Study Groups	Samples	Mean±SD (Lifespan in months)	p value*	Significance
WOHA	14	52.5±23.09	0.285	No
WHA	16	60.01±25.09		

*Significant value set at 0.05

DISCUSSION

Oral cancer is a disease that impacts the whole person, in addition to the head and neck area. Patients face significant difficulties when receiving an oral cavity cancer diagnosis and subsequent treatment.[8] Our research designed to explore the life expectancy of patients who received holistic treatment after oral cancer treatment. Though there are several studies on the Western population that have stated a relationship between fundamental requirements of life like dietary, mental, communal, and economic status and quality of life, none of them have followed the life expectancy of patients. Quality of life (QoL) is one of the most concerning health issues for oncology patients. It is a type of patient-reported outcome (PRO) that patients perceived as encompassing their communal, economic, psychosocial, and physical well-being. The social determinants of health influence all stages of the cancer continuum, including diagnosis, treatment, and end-of-life care. The term "survivorship experience" is a composite account of the life trajectory of a cancer patient, encompassing aspects of the patient's health, psychological well-being, quality of life, and social interactions.[9] Medical decisions regarding oncological treatments are increasingly made by patients, using trade-offs between survival and treatment-related morbidity as guidelines. A number of factors related to the patient, such as the availability of caregivers and the quality of life for the patient, should be taken into account

when evaluating the benefits and burdens of long-term care.[10] In a recent publication, Windon et al. investigated the perspectives and preferences of head & neck cancer (HNC) patients.[11] A majority of the patients' preferences were based on the following priorities: "cure of disease," "survival as long as possible," and "trusting in healthcare providers."

Spirituality is one consequence that has received less attention than the others. Numerous studies have shown that patients with life-threatening illnesses experience unmet spiritual needs, as well as existential suffering, spiritual distress, and pain (Harrison et al.). Between 14% and 54% of cancer patients indicated that they had unmet spiritual needs in survey responses, according to a review of 94 supportive care needs.[12] Spiritual care is a type of nursing that involves positive experiences for both the nurse and the patient. This concept has been studied in depth, with research showing that spirituality is an aspect of individuals and an internal phenomenon that is connected to personal excellence, perception, and compassion. This idea is characterized by faith in God or a higher power and interpersonal interaction.[13] Our study also supports the spiritual concept, as the QoL score and life expectancy were higher in patients who have faith in God.

It has been shown in research that physical activity may be able to improve a variety of outcomes in patients with HNC, including quality of life, sleep, pain, depressive symptoms, lean

body mass, muscle strength, and physical functioning. A substantial amount of evidence indicates that patients with other types of cancer are more likely to survive if they engage in physical activity. Several meta-analyses and systematic reviews have shown that, when compared to sedentary controls, physical activity has been associated with a higher overall survival rate. In addition, meta-analyses have shown that cancer survivors who practice Tai Chi or yoga report improvements in their immunity, fatigue levels, and health in general.[14] In the present study, the oral cancer patients who regularly did yoga and exercise showed a higher QoL score and also approximately 4-6 months more life period than patients with sedentary lifestyles.

The concept of social support encompasses many dimensions, including informational, emotional, self-esteem, tangible, and social components. People feel appreciated when they have social support, as they feel that they are cared for and accepted by someone. The presence of supportive interpersonal relationships has the potential to influence the health of cancer survivors. Cancer survivors need social support from their families and friends in order to achieve good health. The patient's quality of life will be improved, stress will be reduced, anxiety will be decreased, and family bonds will be strengthened. As a result of the onset and treatment of oral cancer, patients experience functional impairments in chewing, swallowing, and articulating, as well as aesthetic problems that significantly impact their daily lives. It is also a significant psychosocial concern, resulting in anxiety and depression for many patients. Approximately 10% of cancer patients suffer from depression compared to healthy individuals. In addition to being a life-changing experience, a cancer diagnosis and treatment can be mentally and emotionally stressful.[15] Our study showed an increase in the average lifespan of 65 months in HNC patients with social integration and 60 months with emotional support from family and relatives, compared to other groups which had 57 and 43 months, respectively. One study found that about 45.3% of patients had a low level of social support, followed by a moderate level of social support (34.2%). The mean social support score in cancer patients was 10.4 ± 2.6 standard deviation (SD).[16] A study conducted in Turkey found much higher rates of seclusion and dejection in cancer patients. Due to the life-threatening nature of the disease, cancer patients

are often lonely and desperate. This can lead to a transformation in their lifestyle and a trivial lifespan.[17]

LIMITATIONS

The present study has a limited sample size as the complete follow-up data were not available for most of the patients. QoL questionnaire was only source to analyze the quality of life, not the expectancy of life. During the management of obtained data we came across a few QoL scores at average level but those patients did not opt for the cancer care program that is why for the affirmative result, complete follow-up analysis is necessary. To find out the sustained assessment of life expectancy studies required to conduct in Cancer care facilities where complete follow-up data are available on their patients till they are alive.

CONCLUSION

Holistic treatment for oral cancer patients involves a comprehensive evaluation of the patient's physical, psychological, and social well-being. The article highlights the subjective nature of quality of life and how it relates to the patient's satisfaction with their physical, psychological, and social functioning. The holistic approach aims to increase life expectancy after oral cancer treatment by analyzing the critical components related to long-term survival.

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None declared

CONFLICT OF INTEREST

Nil

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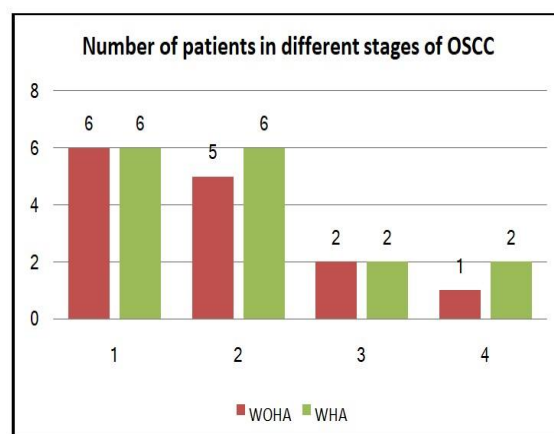
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Figure Legends

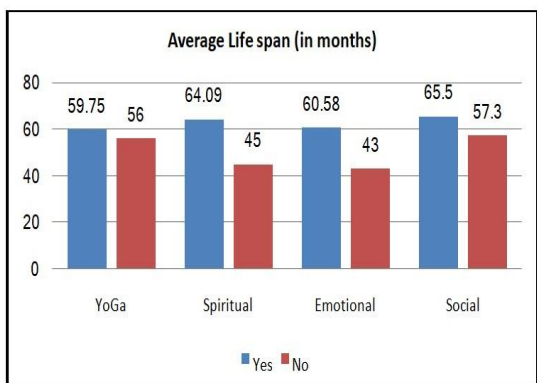
- 1- Number of patients in both study groups at different stages of OSCC.
- 2- Average lifespan of OSCC patients with and without holistic parameters.
- 3- Average overall lifespan of OSCC patients in both study groups.
- 4- Average lifespan of in both study groups at different stages of OSCC.
- 5- Average QoL score in both study groups at different stages of OSCC.

Graph 1- Number of patients in both study groups at different stages of OSCC

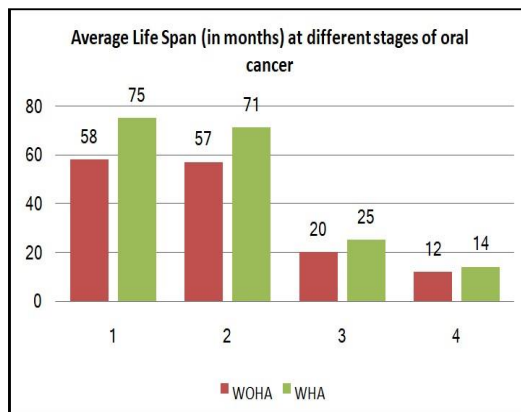


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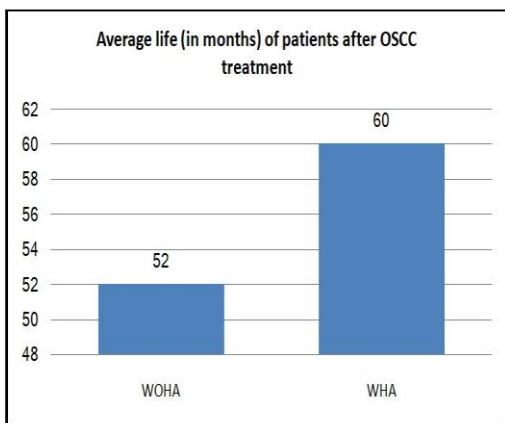
Graph 2- Average lifespan of OSCC patients with and without holistic parameters



Graph 4- Average lifespan of in both study groups at different stages of OSCC



Graph 3- Average overall lifespan of OSCC patients in both study groups



Graph 5- Average QoL score in both study groups at different stages of OSCC

