

Impact of Oral Cancer & Related Factors on the Quality of Life (QOL) of Patients

Larissa Martha*, Dr. Aparna Bhaduri, Dr. Anice George Jain

Introduction

Cancer is becoming a major health problem in India where about 56,000 new cases are estimated each year, which leads to more than 1,00,000 persons suffering from cancer every year. Pakmude (2000) reported that oral cancer is among the 10 common cancers. In the world approx 5-9 million new cancer cases are added every year. Out of these, there is high incidence of cancer of mouth /Pharynx in developed and developing countries like India where cancer patients, especially oral cancer are vulnerable to psychosocial and physical problems.

Objectives

- Ø To determine the QOL of oral cancer patients in pre treatment, during treatment and post treatment periods as measured by multidimensional quality of life Index-FACT-G.
- Ø To compare the quality of life of patients measured, pre treatment, during treatment and in post treatment period (just before the discharge).
- Ø To find out the correlation between different domains of QOL.
- Ø To determine the relation between quality of life of oral cancer patients and the related factors (social support, symptoms distress,

performance status and hope), demographic & disease related factors.

Research Methodology

The study used Johnson's Behavioural Model and adopted a comparative co-relational survey approach in the study. Non-probability purposive sampling technique was used to about 30 surgery & 30 radiation, newly diagnosed oral cancer patients. Researchers interviewed the subjects by using 3 standardized tools- Multidimensional Quality of Life Index (FACT G scale), Karnofsky Performance Status Scale, Nowotony Hope Scale and 3 self prepared tools - Social Support scale, symptoms Distress Scale, and Demographic and Clinical Proforma. These prepared tools were validated and reliability was tested. The researchers collected the data from the oral cancer patients in all the 3 treatment periods.

Major Findings

- Ø Majority of (70%+) of patient's QOL scores were between the class interval of 40-59 in all the 3 treatment periods in surgery group. But in radiation group majority (55%+) patients scored between 50-69.
- Ø One way analysis of variance showed significant difference in mean QOL score between three different periods in radiation group, $F_{(2,87)} = 8.854$,

$P < 0.01$ and not in surgery group, $F_{(2,87)} = 1.88$, $P > 0.01$.

- Ø In radiation group there was a significant difference in mean QOL score between the "pre and during treatment" $t_{(29)} = 5.08$, $P < 0.01$ and 'during post treatment period', $t_{(29)} = 3.29$, $P < 0.01$, mean QOL scores, indicating that 'during' treatment period QOL score was least.
- Ø Both in Surgery and Radiation groups the difference in mean QOL score 'during treatment and in post treatment period was not significant. $t_{(29)} = 1.67$, 0.60 $P > 0.01$ respectively.
- Ø Inter-Correlation between the four subscales of QOL showed positive relation with each other and with the total QOL scores.
- Ø The most common symptom causing 'symptom distress' was 'chewing solid food' in three different treatment periods of surgery and radiation group except in pre treatment period of radiation group.
- Ø Most of the oral cancer patients were moderately hopeful.
- Ø Social support was highest 'during treatment' period in both the groups. Regarding the supportive function, all three supportive functions; emotional, informational & instrumental were also highest during treatment period 17.19, 6.10, 5.53 in surgery group & 19.37, 5.47, 6.83 in radiation group, respectively.

Author

*Associate Professor,
Yenepoya Nursing College, Mangalore.
[at the time of writing this article]

- Ø During all 3 time period maximum percentage of subject had performance status in the range of 50-60 in both the groups except in radiation patients in post treatment periods, where maximum frequency percentage was in the range of 70-80 scores.
- Ø The combination of hope, symptom distress, social support, performance status, demographic and disease related factors in combination showed the maximum variance in QOL in surgery and radiation group of oral cancer patients ($R^2 = 81.2\%$, 50.3% respectively) during treatment period.
- Ø Even in post treatment period the combination of hope, social support, demographic and disease related factors in combination showed the maximum variance in QOL in surgery and radiation group of oral cancer patients ($R^2 = 58.3\%$, 70.5% , respectively) in post treatment period.
- Ø The maximum significant positive prediction of QOL was by the contribution of hope ($\beta=0.574$, age of the patient ($\beta=0.546$), in surgery group during treatment period and by social support ($\beta= 0.551$) in radiation group in post treatment period.
- Ø Symptom distress predicted QOL in negative manner in both the group i.e., increase in symptom distress decreased QOL.
- Ø Performance status and symptom distress predicted hope negatively.
- Ø Symptom distress predicted social support in

positive direction.

The predictive ability of all variables were not significant but they had some predictive ability of QOL.

Discussion

The mean QOL scores were lowest in surgery and radiation group "during treatment" period. The findings of Kaasa, Mastekaasa & Thuroid (1988) in lung cancer patients in a 4 cycle period have also supported that patients' physical status goes down "during treatment period". It may be due to the stress and agony they undergo. Murray, Madsau, Martin & Robbins (1998) in a study on H & N cancer patients found that QOL decreased during treatment. The QOL scores in post treatment period was increasing and this might be due to the absence of serious side effects, which is adequately supported by Rogers et al (1998).

Apparently, it was found that mean QOL score of radiation patients was worse than surgery patients. This improved QOL in surgery patient as explained by Urken, Moscoso, Lawson & Biller (1994).

All the subscale score in both the groups indicate that in post treatment period QOL did not reach beyond the pretreatment scores except in physical and social in subscale scores in radiation group and emotional subscale in surgery group, which reached higher than their pre-treatment scores. This may be due to their high premorbid QOL status, or time to assess the QOL may have been short. Hammerlid, Bjordal, Enquist, Jannert, Kaasa Sullivan & Westin (1997) assessed QOL 6

times in 1 year suggesting QOL needs periodic assessment.

Functional subscale QOL was apparently restored better in surgery group than radiation group suggesting functional ability was impaired more in radiation patients. But Arai, Kawakit, Hilda, Terashi, Okada and Yoshida (1996) found that radiation group had better working ability and Moore Parsons and Mendenhall (1996) showed that surgical resuction of tongue resulted in better QOL than radiation patients.

Studies by Hammerlid et al (1997) Beekun & Calman (1994) Magnus (1994), found that "the ability to eat" – masticating functions were severely altered causing distress which is also the main problems in the present study subjects.

Increased hope scores in post treatment period indicate that patients were striving towards goal of recovery as commented by Barry (1996). But Yancey Greger and Coburs (1994) contradicted it. Sparanger et al (1996) also found that QOL depend on factors like age, disease stage and treatment modalities.

In the present study social support had significantly predicted QOL. It is supported by a study by Matheison et al (1996). They showed that medical information social support predicted better QOL and psychological state.

Implications

Nursing Practice

Quality of life is very complex in nature so it needs to be further probed into, to explore all aspects of the phenomena as well as the factors that influence it. Based on the assessed, QOL care can be planned and imple

mented, evaluated and revised during various treatment periods. The subjective assessment of patients' satisfaction with life gives more valid and reliable information. The perceived benefits of the treatment patients undergo can be determined in terms of QOL. Concentrating on QOL allows nurses to target concerns and issued appropriate with respect to the patients.

A systematic and continuous assessment of patients for symptoms and dysfunctional responses will help the nurses to prepare the patients and plan specific interventions to meet the needs and improve QOL in patients. The identification of psychosocial variables causing decrease in QOL will help in implementing preventive strategies (Relaxation therapy, support group conferences, hope interventions etc). Identification of performance status helps the nurses to assess whether the physical status of the oral cancer patients is stable or deteriorating.

Nursing Administration

While the basic curriculum of nursing includes only care of patients with common & general conditions, nurse administrators must provide continuing education or short-term courses to nurses. So that they can provide skilled care to oral cancer patients. Nurse administrator need to emphasize the need for not only having courses at post basic level but also create posts in clinical area for specialist nurses.

Nursing Research

Cancer clinical trials with the use of QOL tools will give a

better picture on the effectiveness of treatment. So appropriate training and education in the principles and methods of QOL research need to be conducted. Based on this study area of QOL causing alteration to patients can be determined and this can act as a contributing factor for further research or to organizations already involved in QOL research in oral cancer patients.

Conclusion

It is concluded that assessment of QOL helps nurses to determine the area of concern. Majority of patients under study possessed below average QOL and their masticatory functions like chewing and swallowing were causing distress. In spite of low QOL score majority of patients were hopeful in both groups showing a significant predictive ability to QOL in surgery group whereas in post treatment period in radiation group social support had significant predictive ability of QOL. Hence, it is concluded that hope and social support are important factors that influence QOL.

REFERENCES

- Barry, P. (1996). "Psychosocial nursing of physically in patients". (3rd ed.). New York: Lippincott, pp 256-259.
- Chandra, P.S., Chaturvedi, S.K., Channbasavappa, S.N., Anantha, N., Reddy, B.K. Sharma, S., & Rao, S. (1998). Psychological well being among cancer patients receiving chemotherapy. "Quality of Life Research", 7(6), pp 495-500.
- Freelander, E., Espie, C.A., Compsie, L.M., Soutar, D.S., & Robertson, A.G. (1989). Functional implications of major surgery for intraoral cancer. Oral Oncology, 42, 266-9.
- Hammerlid, E., Bjordal, K., Ahlner, E.M., Jannrt, M., Kaasa, S., Sullivan, M & Westin, T. (1997). Prospective longitudinal quality of life study of patients with head and neck cancer "Archive of Otolaryngology Head and Neck Surgery", 166 (6pt 1), pp 666-73.
- Kaasa, S., Mastekaasa, A., & Thoruid, E. (1988). Toxicity, physical function and every day activities reported by patients with inoperable non SCLC in randomized trial (Chemotherapy VS Radiotherapy) "Acta Oncologica", 27(4), pp 343-49.
- Mathieson, C.M., Logan, S.C.L., Phillips, J., MacPhee, M., & Attila, I. (19996). Caring for head and neck oncology patients. Does social support lead to better quality of life. "Cancer Family Physician", 42(9). Pp 1712-20.
- Nowtony, M.C. (1986), measurement hope ad exhibition by a general adult after a stressful event. Dissertation Abstracts International, 47(8), 3296-B (University Microfilms No. 8626494).
- Packmode, V.K. (2000). Cancers of the Mouth. (April 11). "Indian Express", p A4.
- Sharma, S.K., & Phaterperkar, S. (1992). Assessment of quality of life in clinical research. "Paper presented in imposing on quality of life in relation to illness proceedings of XIII World Congress on social Psychiatry". New Delhi, pp 1-7.

