Evaluation of Degree of Thanatophobia Associated with Prosthetic Rehabilitation of Oral Cancer Patients

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Abstract Psychosocial effects of oral cancer have been studied with less devotion to patient related problems like thanatophobia or fear of death in such individuals. Thanatophobia is measured using Death attitude profile (revised) along with four other dimensions of death. Fear of death that develops after definitive diagnosis of oral cancer has psychological impact and may affect patient compliance to any treatment. Oral cancers are mostly of squamous cell type which has high mortality rates as compared to other cancers of the oral cavity. Ten subjects treated for different types of oral cancer were followed prospectively and recalled after 1, 2, 3 and 6 months respectively. A questionnaire that would determine the degree of thanatophobia was filled by the patients and scored on a scale from 1 to 7 in the direction of strongly disagree (1) to strongly agree (7). Patients were found to have maximum fear at second month which declined at the end of six month.

Keywords: death, squamous cell carcinoma, hemimandibulectomy, maxillectomy, biopsy

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1. Introduction

Challenges to medical profession exist since its inception and one of the persistent challenges to medical profession has been managing cancer. It is basically an uncontrolled growth of abnormal cells that has eluded researchers in both diagnosis and treatment. Amongst various types of cancers, Oro – pharyngeal cancers are among the most common cancers in the world (sixth) [1,2,3] mainly due to the widespread use and availability of tobacco and alcohol. [4,5,6] In developed nations like the United Kingdom, oral cancer has been found to be the 19th most common cause of cancer death accounting for 1% of all deaths from cancer. [7] Cancer of the lip and oral cavity is 15th most common cause of cancer death worldwide, thus implementing mortality associated to oral cancers. [8,9] With ever increasing ageing population and advances in early cancer diagnosis, there is an increase in the number of cancer survivors (9.6 million in the USA alone). [10] Treatment of cancer presently being toxic in nature increases the risk of medical problems like cardiovascular diseases, osteoporosis, diabetes, [11] psychological trauma (associated with cancer recurrence), [12] impaired functional capacity, [13] insomnia, [14,15] depression and poor quality of life.

One major aspect of any cancer is its ability to cause death if not diagnosed and treated appropriately, which is why everyone fears cancer in any of its forms. Fear of death or Thanatophobia is universal and complex, but is specific and conscious. [16] Reasons for this fear include the thought of loss of self, fear of pain and suffering, realization of lost opportunity for atonement and salvation and concerns about surviving family members. [17,18,19,20] However, the degree of fear in cancer patients is bound to vary with time and has clinical implications, especially in patients with oral cancer where recurrence is high. To assess the death attitudes of cancer patients in general a variety of instruments has been developed [21,22,23,24,25].

Amongst cancers of the oral cavity, 90% are squamous cell in type arising from the oral epithelium [26], and the term oral cancer is usually used synonymously with this type of tumor. Although incidence of oral cancer has risen, especially in younger men, the mortality rate has not improved in decades, remaining at over 50%. [27] Most of the patients diagnosed with oral cancer before distant metastasis undergo extensive surgeries that later require prosthodontic rehabilitation. Prosthodontic rehabilitation of such patients is presently carried at the first sign of tissue repair without clinical application of the degree of fear associated with oral cancer in such patients. This clinical study was therefore done to find out the existence of thanatophobia and its level in patients having been diagnosed of oral cancer. The study would also determine any increase or decrease of the degree of thanatophobia in such patients over a period of time.

2. Materials and Methods

The investigation was designed as a descriptive case study in which individuals who were suffering from oral cancer were analyzed through a questionnaire for existence of thanatophobia. Sixteen eligible candidates included all patients who were diagnosed confirmatively with oral cancer and had undergone surgeries in relation to their diagnosed clinical condition. The subject's age ranged between 45 to 75 years. These subjects were identified from the register of the department of prosthodontics who had sought prosthetic rehabilitation after surgery. Other criteria for subjects inclusion was potentially cooperative patients who would report for a follow up after 1, 2, 3 and 6 months respectively. All the patients had undergone radical surgeries in relation to their diagnosed clinical condition and had developed maxillofacial deformity (Figure 1 and Figure 2). Surgical procedures ranged from maxillectomy to mandibulectomy.

Thanatophobia (fear of death) was determined using one dimension of the death attitude profile (revised) scale [28] which contains 32 sets of questions that determine five different dimensions of death attitude out of which degree of fear or thanatophobia is one.

The thanatophobia scale is a seven-point ordinal scale containing seven items. The scale contains an anchor on either end: "strongly disagree" as one extreme, and "strongly agree" as the other. Scores for all items are from 1 to 7 in the direction of strongly disagree (1) to strongly agree (7). For each dimension, a mean scale score can be computed by dividing the total scale score by the number of items forming each scale (Table 1). At each recall appointment after clinical definitive diagnosis the patients were asked to fill the questionnaire which was then scored accordingly to determine the degree of fear associated with oral cancer regarding death. Overall DAP-R score was determined by dividing raw score obtained from the questionnaire by total number of statements.

Figure 1. Oral cancer patients with deformities of the maxilla (a to d - maxillectomy)
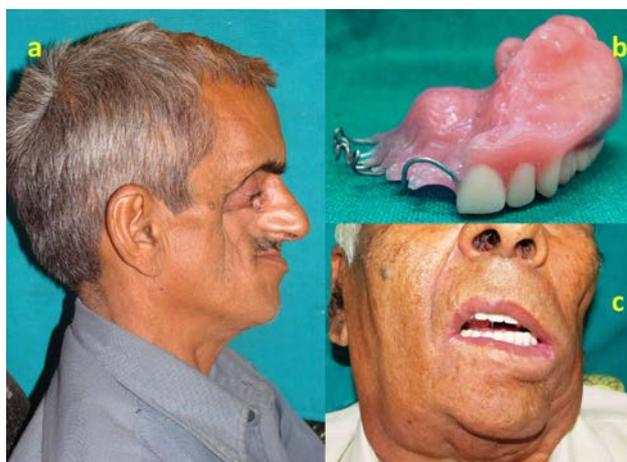
Figure 2. Facial debilitation due to oral cancer (a - maxillectomy, b- intermediate obturator, c- hemimandibulectomy)

Table 1. Death attitude profile – revised (DAP-R)

Scoring criteria for each question						
SD (Strongly disagree)	D (Disagree)	MD (Moderately Disagree)	U (Undecided)	MA (Moderately agree)	A (Agree)	SA (Strongly agree)
1	2	3	4	5	6	7
Overall DAP-R score = raw score/total statements						
1	2	3	4	5	6	7

Table 2. Mean DAP-R scores of degree of thanatophobia at various intervals after diagnosis of cancer (maximum score 7)

S. No	Age /sex	Type of cancer	First month	Second month	Third month	Sixth month
1	48/M	SCC (Tongue)	6.32	6.88	6.12	4.98
2	45/M	SCC (Palate)	6.11	6.56	5.45	5.57
3	54/M	SCC (Palate)	6.45	6.76	6.12	4.67
4	49/M	ACC (Palate)	5.97	6.56	6.16	4.12
5	59/M	SCC (Tongue)	6.12	5.98	6.24	3.14
6	68/M	SCC (Floor of the mouth)	5.95	6.12	6.10	4.12
7	69/M	SCC (Tongue)	5.88	6.67	5.67	3.87
8	58/F	SCC (Palate)	6.12	6.12	5.95	3.76
9	72/F	SCC (Palate)	6.40	6.46	5.34	4.76
10	70/F	SCC (Tongue)	6.12	6.34	5.45	4.45
Total			61.44	64.45	58.6	43.44
Score (maximum score -7)			**6.14**	**6.44**	**5.86**	**4.34**
			(A-SA)	(A-SA)	(MA-A)	(U-MA)

3. Results

The mean score for fear of death calculated on the DAP-R scale at four recall visits in patients who were diagnosed definitively with oral cancer are shown in Table 2. The mean score for fear of death was highest at second recall (6.44) which was calculated at two months of clinical diagnosis. At the first recall (one month) the mean score was 6.14 which was followed by the score at third recall (third month) (5.86). At the fourth recall (six months) of clinical diagnosis the mean score for fear of death associated with oral cancer was 4.34. When evaluated against the scale degree of thanatophobia in patients suffering from oral cancer falls within the range of undecided after 6 months to strongly agree at first or second month.

4. Discussion

The topic of death was considered a taboo in the sixties since Kubler-Ross' book on death and dying [29,30] played a pivotal role in the growing popularity of death awareness, especially in the wake of events of world war II. [31,32] Research in the field of death is a fertile ground that still needs to be explored. Attitude towards death has been studied among medical fraternity, especially for nurses and students. [33,34,35] There are no studies that have measured fear of death, of actual patients leave aside patients with oral cancer. Death is fearful because of many reasons. These include concerns about self and surviving family members, anonymity associated with post death, religious beliefs, including salvation and sense of achievements in life. Death has been studied in five dimensions (fear of death, death avoidance, neutral acceptance, approach acceptance and finally escape acceptance). For patients with oral cancer, especially who need prosthetic rehabilitation, the inherent fear of death is expected to affect the patient's attitude towards dental treatment and the prosthesis in itself.

The results after one month post clinical definitive diagnosis of oral cancer show a mean value of 6.14 (out of a total of 7) which, when interpreted on the thanatophobia scale is between agree and strongly agree. In fact the values at first, second and third month lie within the same range. In the second month the fear was found to be higher than the first month (mean 6.44). Increase in fear could be of many reasons, but as viewed by Butler, [36,37] those who see their lives as fulfilling and meaningful should show less death fear and anxiety and more death acceptance. If this holds true than during the first three months post diagnosis, the ability of an individual having oral cancer has still not come to terms with the fact that death has to be accepted. This was seen at six months when the same individuals gave a response score of 4.34 which, according to scale falls in the realm of undecided to moderately agree. Therefore, unless the cancer patient does not start to cope with the existing situation and accepts death rather than fear it, his compliance towards prosthesis treatment will be affected.

Coping on the other hand is a complex mental process by which the person finally deals with stress and solves his problems. An important component of coping is that the individual starts making decisions. Coping process involves two basic processes which are confronting and managing. As can be observed in the study that during the first three months the patients seem to be still in the stage of confrontation and during the sixth month they show signs of a managing fear associated to death.

5. Conclusion

Death is complex in nature especially the progress towards it. Determination of thanatophobia associated with oral cancer can be a significant diagnostic and prognostic tool that needs further study in future. Definitive prosthodontic rehabilitation in such patients should be either deferred by 3 to 6 months or should be accompanied by psychosocial coping of such patients.

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