

Oral Health Status and Gender-wise Prevalence of Periodontal disease among Cancer Survivors in Pakistan

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Abstract

Objective: The objective of the study was to explore the oral health status as well as gender-wise difference related to periodontal diseases status among cancer survivors. **Method:** Data of this cross-sectional study was collected from 100 cancer survivors from two hospitals. Data was analyzed using chi-square. **Results:** The descriptive statistics revealed that 62% participants showed very poor oral health whereas 38% participants reported poor oral health. Greater chewing difficulties were reported by 70% of the participants and 30% participants reported normal problems in chewing. Problem in speaking was reported at higher level by 58% participants whereas 42% participants reported less difficulty in speaking. Gender wise difference related to periodontal diseases among cancer survivors revealed that more males were found healthy as compared to females, greater number of females had gum bleeding, calculus and 4-5mm tooth pocketing as compared to males and higher number of males had 6mm or greater tooth pocketing as compared to females. **Conclusion:** In conclusion, cancer survivors have poor oral health status as well as they suffer from periodontal diseases. **Keywords:** Cancer Survivors, Oral Health Status, Periodontal Disease, Gum Bleeding.

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INTRODUCTION

In present era, one of the major and highly prevalent health problem is named as cancer. Its spread is almost same around the globe. As per the WHO's project, GLOBOCAN, it was estimated that in 2012, around 14.1 million cancer cases were reported and the fatality rate was recorded as 8.2 million globally [1]. In Korea, the rate of survival among cancer patients has increased so quickly in early 1990's due to the cancer screening programs as well as therapy improvement [2]. Hence, a significant concern for survivors of cancer in taking care of them is to explore the ways of enhancing their long-lasting quality of life. Numerous dormant clinical ailments can appear in the course of or after the treatment of cancer due to which the decrease in the survival advances attained by latest progress in curative-intent therapies. Therefore, long-term survivorship issues, including those that are related to oral health, are important components of cancer care and follow-up [3, 4].

treatment of cancer such as chemotherapy. These complications may include infection⁷, oral mucositis [5, 6], dysfunctioning of salivary gland [9], xerostomia [8], alteration of taste, nutritional compromise, and dental growth abnormality [7]. Quality of life of cancer patients related to their oral health might be affected due to these medical complications.¹⁰ Moreover, oral functioning could be affected by the head and neck surgical therapies [11] which may result in negative impact on the mental wellbeing as well [12].

While maintaining better quality of life, no one can neglect the oral health maintenance. As cancer survivors usually suffers from chronic oral ailments due to oncological treatment, they are at higher risk of having low quality of life which are often ignored [4]. Additional, the impact of oral health on systemic health has been observed at both levels i.e., direct as well as indirect, including cancer [13]. Therefore, among cancer patients, oral health maintenance at good level is also important.

There are numerous complications related to Oral health which are linked with cancer or the

The amount of saliva secretion decreases in cancer patients along with the teeth cleaning difficulties because of mucositis, and restricted mouth opening afterwards surgical resection [14]. Regardless of the global recognition of the systemic health issues related to cancer, status of oral health as well as the cancer survivors' behavior regarding their oral health has not been entirely explored. Up till now, there are inadequate data on the status of oral health among survivors of cancer. Hence, the present study explored the oral health status as well as gender-wise difference related to periodontal diseases status among cancer survivors.

METHODS

This cross-sectional study was conducted in two cancer hospitals in Pakistan. The data of 100 cancer survivors was collected from the survivors of cancer who were recovered from any cancer but during treatment they had chemotherapy and radiotherapy and at the time of data collection they came to the hospital for follow up. After explaining the purpose of study, informed consent was get signed by every participant.

Self-reported questionnaire related to oral health problems was given to the participants for response recording. Periodontal diseases were also

investigated via oral examination by the well-trained dentists working in government hospital. Six divisions of mouth was made, i.e., right and left posterior maxilla, anterior maxilla, left and right posterior mandible and anterior mandible. For the assessment of periodontal diseases, the community periodontal index (CPI) was used. The scoring of CPI was from 0 to 4 where 0 points means healthy, 1 point means gum bleeding, 2 points means during probing calculus was seen, 3 points means pocket of 4 to 5 mm, and gingival margin within the black band were observed), and 4 points means 6mm or greater pocket, and not visible black band were seen). Data was analyzed in SPSS version 25.0. Descriptive statistics were used to analyze data such as percentages. For gender difference analysis, Chi-square correlation was used.

RESULTS

The descriptive statistics revealed that 62% participants showed very poor oral health whereas 38% participants reported poor oral health. Greater chewing difficulties were reported by 70% of the participants and 30% participants reported normal problems in chewing. Problem in speaking was reported at higher level by 58% participants whereas 42% participants reported less difficulty in speaking.

Table-1: Self-reported oral health status of cancer survivors

| Statement | Poor | Very Poor |
|--|-----------|----------------|
| How would you rate your oral health? | 38% | 62% |
| Statement | Difficult | Very Difficult |
| Do you have chewing difficulties due to oral health problems? | 30% | 70% |
| Do you have speaking difficulties due to oral health problems? | 42% | 58% |

To explore the gender wise difference related to periodontal diseases among cancer survivors, chi-square was used. The results revealed that 30% males and 0% females were healthy, 14% males and 18% females had gum bleeding, 36% males and 48%

females had calculus, 20% males and 34% females had 4-5mm tooth pocketing and 30% males and 0% females had 6mm or greater tooth pocketing. This difference was found to be significant ($X^2(3, 96) = 17.992, P < .001$).

Table-2: Periodontal diseases status among cancer survivors

| Gender | Completely Healthy 0 | Gum Bleeding 1 | Calculus 2 | 4-5mm pocketing 3 | 6mm or greater pocketing 4 | X ² | Sig. |
|--------|-------------------------|-------------------|---------------|-------------------------|----------------------------------|----------------|------|
| Male | 30.0% | 14.0% | 36.0% | 20.0% | 30.0% | 17.992 | .000 |
| Female | 0.0% | 18.0% | 48.0% | 34.0% | 0.0% | | |

DISCUSSION

The aim of the study was to explore the oral health condition as well as periodontal diseases among cancer survivors. 62% participants showed very poor oral health whereas 38% participants reported poor oral health. Greater chewing difficulties were reported by 70% of the participants and 30% participants reported normal problems in chewing. The amount of saliva secretion decreases in cancer patients along with the teeth cleaning difficulties because of mucositis, and restricted mouth opening afterwards surgical resection [14]. Problem in speaking was reported at higher level

by 58% participants whereas 42% participants reported less difficulty in speaking. Quality of life of cancer patients related to their oral health might be affected due to these medical complications [10]. Moreover, oral functioning could be affected by the head and neck surgical therapies [11] which may results in negative impact on the mental wellbeing as well [12].

Gender wise difference related to periodontal diseases among cancer survivors revealed that more males were found healthy as compared to females, greater number of females had gum bleeding, calculus

and 4-5mm tooth pocketing as compared to males and higher number of males had 6mm or greater tooth pocketing as compared to females. As cancer survivors usually suffers from chronic oral ailments due to oncological treatment, they are at higher risk of having low quality of life which are often ignored [4]. In conclusion, cancer survivors have poor oral health status as well as they suffer from periodontal diseases.

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