



**Research Article**

**AWARENESS AND PRACTICES OF PATIENTS WITH CANCER TO PREVENT MUCOSITIS IN REGIONAL CANCER HOSPITAL, SHIMLA, HIMACHAL PRADESH**

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**ABSTRACT**

Mucosal ulceration is one of the most distressing side effects of cancer therapy. The general aim of the study is to assess the awareness and practices of patients with cancer to prevent mucositis. The Investigator conducted this study in the Regional Cancer hospital Shimla, H.P in the month of November 2015. The sample size comprised of 40 patients, of both genders, diagnosed with cancer and planned for radiotherapy or chemotherapy. Structured questionnaire and practice assessment checklist were used to assess awareness and practices of patients. Study findings shows that out of 40 respondents only 5% of the respondents had good level of awareness, 42.5% had average level of awareness and most of most of them (52.5%) level of awareness regarding prevention of mucositis and 55% had poor, 35% had average and only 10% respondents had good practices regarding prevention of mucositis.

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**INTRODUCTION**

According to GLOBOCAN 2012, an estimated 14.1 million new cancer cases and 8.2 million cancer related deaths occurred in 2012. Prevalence estimates for 2012 shows that there were 32.6 million people living with cancer (within 5 years of diagnosis) worldwide. The overall age standardized cancer incidence rate is almost 25% higher in men than in women, with rates of 205 and 165 per 100,000, respectively. According to project study conducted by International Agency for Research on cancer (IARC) of the World Health Organization (WHO), reported 7.5 percent rise in the number of cancer patients primarily in India which is due to poor lifestyle choices such as consumption of alcohol, pan masala and tobacco. The lifestyle problems have contributed to cancer of lips, mouth, stomach, colon and rectum among men and to breast, ovarian and cervix cancers among women. In Indian scenario, total 1.1 million new cancer cases were estimated, indicating India as a single country contributing to 7.8% of the global cancer burden and the five year prevalence rate was 1.8 million individuals with cancer corresponding to 5.52% global prevalence.

Karaca H *et.al* (2014) conducted retrospective study on positive effects of oral  $\beta$ -glucan on mucositis and leukopenia in colorectal cancer patients receiving adjuvant FOLFOX-4 combination chemotherapy was conducted in department of

medical oncology Acibadem hospital, Istanbul, Turkey. Study included 62 consecutive patients with colorectal cancer who underwent a FOLFOX-4 treatment regimen. Experimental group received  $\beta$ -glucan and control group did not. Leucocytes, neutrophils, and platelets were evaluated before and 1 week after chemotherapy and oral mucositis and diarrhea were noted. Oral mucositis and diarrhea were less common in the  $\beta$ -glucan group. It was concluded that  $\beta$ -glucan can be used to reduce the adverse effects of chemotherapy.

Panghal M, *et al* (2012) conducted a prospective cohort analysis on the patients undergoing treatment in the radiotherapy unit of Regional Cancer Institute Pt. B.D. Sharma University of Health Sciences Rohtak, Haryana. Total 186 patients with squamous cell carcinoma of oral cavity were analyzed in the study. Study revealed that radiotherapy and chemotherapy treated immune-compromised patients are prone to bacterial and fungal infection with predominance of gram positive bacteria. This study also revealed the presence of C.albicans fungi as most significant oral cavity pathogens in radiotherapy and radio chemotherapy treated patients.

Kumar S *et.al* (2009) conducted a study on radiation mucositis on patients of head and neck cancer. Cancer patients received radiation therapy approximately 200 cGy daily dose of radiation, five days per week for five to seven continuous weeks. Almost all such patients will develop some degree of oral mucositis. Study revealed that severe oral mucositis occurred in 29-66% of all patients receiving radiation therapy for head and neck cancer. The incidence of oral mucositis was especially high in patients with primary tumours in the oral

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cavity, pharynx, or nasopharynx and who received concomitant chemotherapy.

### **Statement of the Problem**

A descriptive study to assess awareness and practices of patients with cancer to prevent mucositis in Regional Cancer Hospital, Shimla, Himachal Pradesh.

### **Objectives**

1. To assess awareness of patients with cancer to prevent mucositis.
2. To assess practices of patients with cancer to prevent mucositis.
3. To associate the findings of awareness, practices and selected sociodemographic variables.

## **MATERIALS AND METHODS**

### **Research Approach**

In the present study, quantitative research approach applied to explain the possible relationship between the awareness, practices and selected sociodemographic variables as objectives of the study.

### **Research design**

Descriptive research design has been used

### **Research variables**

The research variables used in this study are awareness and practices of patients with cancer to prevent mucositis.

### **Research setting**

The research study was conducted in the Regional Cancer Hospital Shimla.

### **Population**

Population was cancer patients comprising of age group (30-70) years receiving chemotherapy or radiotherapy in Regional Cancer Hospital Shimla H.P.

### **Sample**

In this study, the sample included cancer patients receiving chemotherapy or radiotherapy in Regional Cancer Hospital Shimla, H.P. and those who were willing to participate in research study.

### **Criteria for sample selection**

#### **Inclusion Criteria**

1. Cancer patients of age group 30 -70 years.
2. All type of cancer patients.
3. Patients receiving chemotherapy or radiotherapy.
4. Both OPD and IPD patients.

#### **Exclusion Criteria**

1. Patients with mucositis.
2. Those who were not willing to participate.
3. Terminally ill patients.

### **Sampling technique**

In the present study, non-probability purposive sampling technique was used to select the cancer patients from selected hospital Shimla H.P.

### **Sample size**

In the present study, total sample size is 40

### **Development and description of tool**

**Description of the tool:** The tool consists of 3 sections.

#### **Section A**

It consists of sociodemographic variables of subjects which include personal and clinical variables. Personal variables include age, sex, education and unhealthy habits. Clinical variables include type of cancer, stage of cancer, number of radiotherapy session and cycle of chemotherapy.

#### **Section B**

It consists of structured interview schedule to assess the awareness of patients with cancer to prevent mucositis. There were 18 questions in this section and were asked to know the awareness of prevention of mucositis. Each question has 4 choices. A correct answer was given 1 score and 0 score for a wrong answer. The score varied from 0-18 points and was classified into 3 levels based on Bloom's cut off points.

#### **Scoring key**

Levels	Scores	Percentage (%)
Good	13-18	80 -100%
Average	7- 12	60 -79%
Poor	0- 6	< 60%

#### **Section C**

It consists of practice assessment checklist to assess practices followed by cancer patients to prevent mucositis. Fourteen items have been included in this section. A score of 1 was given for each 'yes' response and 0 score for each 'no' response in positive statements and reverse score was given for the negative statements i.e. 0 for each 'yes' response and 1 for each 'no' response. Bloom's cut off point was used to determine practice level. The score varied from 0 to 14 and were classified into 3 levels.

#### **Scoring key**

Levels	Scores	Percentage (%)
Good	10-14	80 -100%
Average	5- 9	60 -79%
Poor	0- 4	< 60%

### **Ethical Consideration**

- Permission was obtained from the Research and Ethical Committee of the Eternal University.
- Permission was obtained from the concerned authorities of Regional Cancer Hospital Shimla HP.
- Before conducting the study, a written well informed consent from the participants for their willingness to participate in the study was also obtained.
- The respondents were explained in detail the full description of the research, confidentiality and voluntary participation. Every received data were treated carefully and privately with no name tag in it. Thus the respondent confidentiality was strictly maintained.
- Three principles which need to be followed in any research which are beneficence, respect of human dignity and justice were duly considered in the study and practiced during the actual conduction of the study.

**RESULTS & DISCUSSION**

In this study, both descriptive and inferential statistics have been used to organize, interpret, and communicate numeric information. Descriptive statistics have been used to describe and synthesize data. Frequency and percentage distribution have been used to estimate parameters. Inferential statistics have been used to make inferences about the population. Chi-Square test has been used to find out association between two variables.

**Table 1** Frequency and Percentage Distribution of Awareness Levels of Patients with Cancer Regarding Prevention of Mucositis.

N = 40			
Variable	Level	f	%
Awareness Regarding Prevention of Mucositis	Good	2	5.0
	Average	17	42.5
	Poor	21	52.5
Mean = 9.95 SD = 2.79			

Table 1 shows that Majority i.e. 52.5% patients with cancer had poor level ( Score < 60%) of awareness, 42.5% of them had average level of awareness (Score 60 -79 %) and remaining 5.0 % of them had good level of awareness (Score 80-100 %) regarding prevention of mucositis. The mean awareness score for the respondents was 9.95 out of possible 18 points and standard deviation was 2.79. The mean score is indicative of low level of awareness for prevention of mucositis.

**Table 2** Frequency and Percentage Distribution of Levels of Practices Followed by Patients with Cancer Regarding Prevention of Mucositis

N= 40			
Variable	Level	f	%
Practices Regarding Prevention of Mucositis	Good	04	10.0
	Average	14	35.0
	Poor	22	55.0
Mean = 8.25 SD = 2.19			

The table 2 depicts that majority of respondents had poor practices (55%) and 35 % had average practices while only 10% had good practices. The mean practice score for the respondents was 8.25 and standard deviation was 2.19. The mean score for practices is indicative of poor level of practices followed by the respondent patients for prevention of mucositis.

**Table 3** Association between Awareness and Practices with Selected Sociodemographic Variables

Variable	Awareness				Practice			
	χ <sup>2</sup> (Cal.)	Df	χ <sup>2</sup> (Tab.)	Sig.	χ <sup>2</sup> (Cal.)	df	χ <sup>2</sup> (Tab.)	Sig.
Age	3.762	6	12.59	.709	1.416	6	12.59	.965
Sex	3.061	2	5.99	.216	4.925	2	5.99	.085
Education	9.911	8	15.51	.271	5.448	8	15.51	.709
Unhealthy habits	5.728	4	9.49	.220	6.743	4	9.49	.150
Type of cancer	13.441	10	18.31	.200	10.317	10	18.31	.413
Stage of cancer	3.139	6	12.59	.791	6.059	6	12.59	.417
Number of radiotherapy session	19.038	10	<b>18.31*</b>	<b>.040*</b>	6.401	10	18.31	.781
Cycle of chemotherapy	12.65	8	15.51	.125	7.577	8	15.51	.476

\* Indicates significant findings at p < 0.05

Data presented in table 3 reveals that the p value for age, sex, education, unhealthy habits, types of cancer, and stages of cancer and cycles of chemotherapy is more than 0.05 and

calculated Chi-square value is less than tabulated value which indicates that there is no significant association (p > 0.05) between level of awareness and age, sex, education, unhealthy habits, types of cancer, stages of cancer and cycles of chemotherapy at 0.05 level of significance.

Data presented in table 3 reveals that the p value for number of radiotherapy session is less than 0.05 and calculated Chi-square value is more than tabulated value which indicates that there was significant association (p < 0.05) between level of awareness and numbers of radiotherapy session at 0.05 level of significance.

Chi-Square value in table 3 shows that there was no significant association (p > 0.05) between level of practices with age, sex, education, unhealthy habits, types of cancer, stages of cancer and cycles of chemotherapy at 0.05 level of significance because calculated Chi-Square value is less than tabulated value and p value is more than 0.05.

**Table 4** Association between Levels of Awareness and Practices Followed by Patients with Cancer Regarding Prevention of Mucositis

N=40				
Variables	Calculated χ <sup>2</sup>	df	Tabulated χ <sup>2</sup>	Sig.
Awareness and practices regarding prevention of mucositis.	80.000	4	18.47**	0.000**

\*\*Indicates highly significant findings at p < 0.001

Data presented in table 4 reveals that the p value for levels of awareness and practices was less than 0.001 and calculated Chi-square value is more than tabulated value which indicates that there was statistically highly significant association (p < 0.001) between levels of awareness and levels of practices regarding prevention of mucositis at 0.001 level of significance.

**DISCUSSION**

Oral mucositis is a major complication of antineoplastic drug therapy that affects patients' quality of life. Radiotherapy is a treatment modality largely used for head and neck malignancies. It is still associated with several complex oral complications. This therapy presents many challenges primarily because the head and neck region has many critical structures that can be damaged by tumor or treatment. Damage to these tissues by tumor or therapy can result in significant structural, cosmetic and functional deficits that negatively impact on quality of life.

Acharya R and Ojha N (2014) stated that the majority of patients had inadequate knowledge and practice on oral care. The knowledge on oral care was adequate among 23.4% of the respondents and 18.6% of the respondents had adequate practices. Only 28.4% respondents had adequate knowledge.

**CONCLUSION**

The result of this study showed that the personal profile of patients were not associated with awareness and practice scores. Clinical profile also did not show any association with awareness and practice score except for number of radiation therapy and awareness. Awareness is higher in patients who have received greater number of radiation therapy. Awareness was significantly associated with practice. Hence patients who

have high awareness regarding mucositis will have a good practice in prevention of mucositis. Most of the respondents have low level awareness (52%) and poor practice (55%). Therefore, proper prevention program needs to be developed to make the cancer patients more aware, which will modify the patients to follow good practices to prevent mucositis. Closing the gap between awareness and practice will continue to be a vital challenge for mucositis prevention and control, as well as targets for reduction of mucositis.

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