



# KNOWLEDGE RATE OF ARDABIL DENTISTS REGARDING DENTAL TREATMENTS IN PATIENTS UNDERGONE RADIOTHERAPY PROCEDURES

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## ABSTRACT

Radiation therapy is the main treatment methods that can be used alone and in combination with other therapeutic methods. It is obvious that without dental care, complications of radiation therapy cannot be avoided, or reduce the severity of complications. The aim of this study was to assess the knowledge rate of Ardabil Dentists regarding Dental treatments in Patients undergone Radiotherapy Procedures

**Methods and Materials:** This cross-sectional study was performed on 120 Ardabil dentists. Data collected by a questionnaire by interview and then analyzed by SPSS.19. using statistical methods.

**Results:** 58.3% of dentists were female and the mean age of dentists was 22.6±7. The mean time from graduation was 6.1±5.4 years. 51.7% of dentists had moderate knowledge. There was no significant relation between graduation, age and sex of dentists with knowledge.

**Conclusion:** Results showed that the knowledge of dentists in Ardabil about patients undergoing radiation was in moderate level, Therefore we recommend some established educational programs in this field.

**Key Words:** Dental treatment, General dentist, Radiotherapy

## INTRODUCTION

Radiotherapy is a treatment for cancer that uses high-energy radiation and high-dose radiation to kill cancer cells and prevent their spread. (1) Radiation therapy can be external or internal; sometimes some patients receive both types. More than 60% of cancer patients undergoing radiation therapy and radiation therapy can be used to treat, stop or reduce the growth of cancer cells. (2) During radiotherapy, oral mucosa show as soon as the effects of treatment. Changes in and around the oral cavity due to damage delicate vascular system, often is changed in dentistry. Salivary glands, and bones are relatively resistant to radiation therapy but due to the severe weakening of the tissues occurs in the vascular system, these sites can be tolerated a significant problem in the long-term use. (3) One of the most serious and the most problematic symptom for patients with head and neck cancer radiotherapy is Osteonecrosis. Radiation, bone endarteritis

(inflammation of the inner lining of the arteries) that leads to tissue hypoxia induced and hypo cellularity. (4) It is obvious that without special care dentistry, we cannot prevent the complications caused by radiation therapy or reduced the severity of unavoidable complications. Dental care should begin before radiotherapy by physical examination and appropriate treatment plans for each patient, doing radiotherapy time and continue after the end of radiotherapy. Dentists, before radiotherapy should be examined the patient's mouth and provide appropriate treatments for teeth's storage and extraction and with prescription appropriate mouth rinse and advice on rise oral hygiene, reduce mucositis in the mouth. Also about dry mouth, decreased pain and irritation can be recommended to use water, glycerin and captopril as a prophylaxis for patients. The use of anti-fungal agents such as Nystatin, can lead to reduce oral Candida infection in these patients. Therefore patients should be monitored at all stages by dentists so that in case of incidence radiation

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side effects, there was controlled quickly. (5) The aim of this study was to assess the knowledge rate of Ardabil Dentists regarding Dental treatments in Patients undergone Radiotherapy Procedures.

## METHODS

This was a descriptive cross-sectional study that has been done on a sample of 120 dentists in Ardabil city at 2014. The sampling method was census and the data collected by a questionnaire include question about knowledge rate which was completed by interview with dentists. The knowledge rate divided in four levels week, moderate, high and very high. Collected data analyzed by statistical methods in SPSS.19 and for measure the significant relation between variables we used Chi-Square test. The  $p < 0.05$  was considered significant.

## RESULTS

50 (41.7%) of dentists were male and rest of them were female. The mean age of dentists was  $32.6 \pm 7$  (range 25-60) and most of them were in age group lower than 35 years. The mean work experience was  $6.1 \pm 5.4$  (range 1-35) and 82.5% of dentists have work experience lower than 10 years. The mean knowledge rate was  $16.8 \pm 2.6$  (range 11-22) and most of dentists with 51.7% have knowledge in moderate level. There was a significant relation between knowledge rate of dentists and age and we can see that with rising age the knowledge rate go up. ( $p = 0.001$ ) (Table 1).

There was a significant relation between knowledge rate of dentists and sex and women dentists have moderate knowledge and men dentists have week knowledge ( $p = 0.8$ ) (Table 2).

There was a significant relation between knowledge rate of dentists and dentists work experience and with raising the work experience the knowledge rate go up and we can see that the dentists with few work experience have lower knowledge rate compare to other dentists. (13% v.s 33.3%) ( $P = 0.016$ ) (Table 3).

## DISCUSSION

The necessary time for patients tooth removal was 7 day which 68.3% pointed truly to it that similar to Koga and et al study. Also in case of ability to tooth extraction in patients with osteonecrosis in radiography about 83.3% related to surgeon idea which wasn't similar to Koga study. (6)

Also, in the current study the osteonecrosis was a worst lesion after radiotherapy which 76.7% of dentists to point truly

and also, most of osteonecrosis was seen in the Mandible area which 60.8% of dentists to point truly and in other studies true response rate was low (7-9).

Niall M.H. McLeod and et al in a study presented that patients to follow treatment regimens and health advice, requires having awareness about their disease and treatment, because without it they would not be able to participate in their care.

In our study for patients in risk of ORN 92.5% of dentists recommended the prophylactic antibiotic which was more than other study. (10)

## CONCLUSION

Results showed that most of general dentists in our study with 51.7% have knowledge in moderate level and there were significant relation between age, education, work experience, sex of dentists, and their knowledge rate.

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**Table 1: Knowledge rate of dentists by age groups**

Knowledge rate	Week		Moderate		Good	
	N	%	N	%	N	%
Age groups						
<35	34	42.5	35	43.8	11	13.8
35-45	4	12.1	24	72.7	5	15.2
>45	0	0	3	42.9	4	57.1

P=0.001

**Table 2: Knowledge rate of dentists by sex**

Knowledge rate	Week		Moderate		Good	
	N	%	N	%	N	%
sex						
male	23	46	18	36	9	18
female	15	22.4	44	62.9	11	15.7

P=0.008

**Table 3: Knowledge rate of dentists by work experience**

Knowledge rate	Week		Moderate		Good	
	N	%	N	%	N	%
work experience (years)						
<10	36	36.4	50	50.5	13	13.1
More than 10	2	9.5	12	57.1	7	33.3

P=0.016