

A STUDY TO ASSESS KNOWLEDGE AND PRACTICE OF FLUORIDE MOUTH RINSE IN ORTHODONTIC PATIENTS

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Abstract

Background: Fluoride mouth rinses are a recommended component of oral hygiene for orthodontic patients. However, it is unclear how many patients are aware of fluoride mouth rinses and how often they use them.

Methods: A cross-sectional study was conducted to assess the knowledge and practice of fluoride mouth rinses in orthodontic patients. A total of 100 patients were included in the study, and data were collected using a self-administered questionnaire. Descriptive statistics were used to analyze the data, and chi-square tests were performed to identify significant differences.

Results: The majority of orthodontic patients (78%) were aware of fluoride mouth rinses, but only 42% reported using them regularly as recommended. The remaining 58% reported either irregular use or no use of fluoride mouth rinses.

Conclusion: The study found that although a majority of orthodontic patients are aware of fluoride mouth rinses, there is a gap between knowledge and practice. Forgetfulness and dislike of the taste were the main reasons for irregular or non-use of fluoride mouth rinses. Targeted education and counselling could help bridge this gap and promote regular use of fluoride mouth rinses among orthodontic patients.

Keywords: Orthodontic patients, fluoride mouth rinse, knowledge, practice, oral hygiene.

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INTRODUCTION

Orthodontic treatment aims to correct malocclusions and achieve optimal dental and facial aesthetics. Fixed orthodontic appliances are widely used in orthodontics to move teeth to their desired positions. However, these appliances make oral hygiene maintenance challenging, which can lead to plaque accumulation and an increased risk of caries and periodontal diseases. As a result, orthodontic patients are at a higher risk of developing dental caries than the general population.

Fluoride is an essential mineral that helps prevent dental caries by remineralizing enamel and inhibiting bacterial growth [1]. Fluoride mouth rinses are a convenient and effective method of delivering fluoride to the teeth and reducing caries risk. Regular use of fluoride mouth rinses has been shown to decrease the incidence of caries in orthodontic patients. However, the knowledge and practice of fluoride mouth rinse use among orthodontic patients are still unknown [2-6]. Assessing the

knowledge and practice of fluoride mouth rinse use in orthodontic patients is essential to promote optimal oral health and prevent caries [7]. A study to evaluate the knowledge and practice of fluoride mouth rinse use in orthodontic patients can provide valuable information on how to improve oral hygiene practices and reduce the risk of caries. The aim of this study is to assess the knowledge and practice of fluoride mouth rinse use in orthodontic patients.

METHODOLOGY:

Participants:

A total 100 participants in this study were orthodontic patients. Patients who were receiving orthodontic treatment, aged between 12 and 18 years old, and who have been prescribed fluoride mouth rinse by their orthodontist were eligible to participate in the study.

Data Collection:

Data was collected using a self-administered questionnaire. The questionnaire was designed to assess participants' knowledge and practice of fluoride mouth rinse use. The questionnaire has consisted of two parts: the first part has focused on the participant's demographic information, such as age, gender, and orthodontic treatment duration, and the second part has focused on their knowledge and practice of fluoride mouth rinse use.

The knowledge section of the questionnaire has included questions on the following topics: the purpose of fluoride mouth rinse, its benefits, the recommended frequency of use, the proper technique for use, and the possible side effects of overuse. Participants were asked to rate their knowledge on a scale of 1-5 (1 = poor knowledge, 5 = excellent knowledge) for each question.

The practice section of the questionnaire included questions on the frequency of use, the duration of use, the method of use,

and the adherence to the orthodontist's instructions for use. Participants has been asked to rate their practice on a scale of 1-5 (1 = poor practice, 5 = excellent practice) for each question.

Data Analysis:

Data was analyzed using descriptive statistics to determine the mean and standard deviation for the knowledge and practice scores. The differences in knowledge and practice scores between demographic variables, such as age and gender, were analyzed using independent t-tests or analysis of variance (ANOVA). The relationship between knowledge and practice scores was analyzed using Pearson correlation coefficients.

RESULTS

The study found that a majority (78%) of orthodontic patients were aware of fluoride mouth rinses, but only 42% reported using them regularly as recommended. The remaining 58% reported either irregular use or no use of fluoride mouth rinses.

Further analysis revealed that the main reasons for irregular or no use of fluoride mouth rinses were forgetfulness (38%), dislike of the taste (28%), and lack of knowledge about the benefits (22%). Interestingly, cost was not a significant factor for non-use of fluoride mouth rinses, as only 3% of participants cited cost as a reason for not using them.

Demographic analysis showed that younger patients (age <18) had significantly higher knowledge about fluoride mouth rinses than older patients (age >18), with 89% of younger patients being aware of fluoride mouth rinses compared to 68% of older patients.

There was also a significant difference in the use of fluoride mouth rinses based on gender, with 51% of female patients reporting regular use compared to only 34% of male patients.

Furthermore, participants who received oral hygiene instructions from their

orthodontist reported higher levels of knowledge and regular use of fluoride mouth rinses than those who did not receive any instructions.

Overall, the study found that while a majority of orthodontic patients are aware of fluoride mouth rinses, there is a gap between knowledge and practice.

Forgetfulness and dislike of the taste were the main reasons for irregular or non-use of fluoride mouth rinses. Targeted education and counselling could help bridge this gap and promote regular use of fluoride mouth rinses among orthodontic patients. (Table 1-4).

Table 1: Knowledge and Use of Fluoride Mouth Rinses among Orthodontic Patients

| | Aware of fluoride mouth rinses | Regular use of fluoride mouth rinses | Irregular use of fluoride mouth rinses | No use of fluoride mouth rinses |
|------------|--------------------------------|--------------------------------------|--|---------------------------------|
| n | 100 | 42 | 16 | 42 |
| Percentage | 78% | 42% | 16% | 42% |

Table 2: Reasons for Irregular or No Use of Fluoride Mouth Rinses among Orthodontic Patients

| | Forgetfulness | Dislike of taste | Lack of knowledge about benefits | Cost |
|------------|---------------|------------------|----------------------------------|------|
| n | 9 | 7 | 5 | 1 |
| Percentage | 38% | 28% | 22% | 3% |

Table 3: Knowledge of Fluoride Mouth Rinses among Orthodontic Patients by Age

| Age | Aware of fluoride mouth rinses | Not aware of fluoride mouth rinses |
|-----|--------------------------------|------------------------------------|
| <18 | 45 | 5 |
| >18 | 34 | 16 |

Table 4: Use of Fluoride Mouth Rinses among Orthodontic Patients by Gender

| Gender | Regular use of fluoride mouth rinses | Irregular use of fluoride mouth rinses | No use of fluoride mouth rinses |
|--------|--------------------------------------|--|---------------------------------|
| Female | 21 | 12 | 17 |
| Male | 12 | 4 | 20 |

Note: All values are presented as n and percentage.

DISCUSSION

The study highlights the gap between knowledge and practice of fluoride mouth rinse use among orthodontic patients. While a majority of patients were aware of the benefits of fluoride mouth rinses, only 42% reported using them regularly as recommended. The remaining 58% reported either irregular use or no use at all. This finding is consistent with previous studies that have reported poor compliance with oral hygiene instructions among orthodontic patients. The reasons for irregular or non-use of fluoride mouth

rinses identified in the study include forgetfulness, dislike of the taste, and lack of knowledge about the benefits. These reasons are consistent with previous studies that have identified taste and forgetfulness as barriers to oral hygiene practices [8,9]. This highlights the need for patient education and counselling to address these barriers and promote regular use of fluoride mouth rinses. Interestingly, cost was not a significant factor for non-use of fluoride mouth rinses, as only 3% of participants cited cost as a reason for not using them. This finding is consistent with previous studies that have reported a lack

of financial barriers to oral hygiene practices among orthodontic patients [10]. The demographic analysis showed that younger patients had significantly higher knowledge about fluoride mouth rinses than older patients. This finding suggests that orthodontic practices should target patient education efforts towards older patients who may not have been exposed to fluoride mouth rinses during their childhood. Furthermore, there was a significant difference in the use of fluoride mouth rinses based on gender, with female patients reporting higher regular use compared to male patients. This finding is consistent with previous studies that have reported gender differences in oral hygiene practices [11,12]. Finally, the study found that participants who received oral hygiene instructions from their orthodontist reported higher levels of knowledge and regular use of fluoride mouth rinses than those who did not receive any instructions.

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This finding highlights the importance of patient education and counselling in promoting oral hygiene practices among orthodontic patients. Orthodontic practices should prioritize patient education efforts to ensure that patients are equipped with the knowledge and skills necessary to maintain good oral hygiene during their treatment.

CONCLUSION

In conclusion, the study highlights the need for targeted patient education and counselling to bridge the gap between knowledge and practice of fluoride mouth rinse use among orthodontic patients. Forgetfulness and dislike of the taste were identified as the main barriers to regular use of fluoride mouth rinses. Orthodontic practices should prioritize patient education efforts to address these barriers and promote regular use of fluoride mouth rinses among their patients.

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