

Harsukh Educational Charitable Society

International Journal of Community Health and Medical Research

Journal home page: www.ijchmr.com

doi: 10.21276/ijchmr

Official Publication of "Harsukh Educational Charitable Society" [Regd.]

ISSN E: 2457-0117

ISSN P:2581-5040

RNI No. - PUNENG/2017/75049

Index Copernicus value 2016 = 52.13

Original Article

Assessment Of Oral Hygiene Practices And Oral Hygiene Awareness Among Orthodontic Patients

Neeru Chahal¹, Mohit Rana², Anu Dhawan³ Shweta Gulia⁴

¹MDS, Department of Orthodontics, Tamil Nadu Govt Dental College, Tamil Nadu, India, ²MDS, Department of Oral and Maxillofacial Surgery, Faculty of Dental Sciences, M S Ramaiah University of applied Sciences Bangalore, Karnataka, India, ³MDS, Department of Conservative Dentistry and Endodontics, Sudha Rustogi College of Dental Sciences, Faridabad, Haryana, India, ⁴MDS, Department of Pediatric and Preventive Dentistry, ITS Dental College, Muradnagar, Ghaziabad, Uttar Pradesh, India

ABSTRACT

Background: Majority of the patients seek orthodontic treatment to improve aesthetics. Oral hygiene is very important for maintain good oral health especially in orthodontic treatment. Good oral hygiene in orthodontic patients helps to prevent any further periodontal disease. **Aim:** To evaluate the oral hygiene practice and awareness among patients receiving orthodontic treatment. **Material and method:** A total of 200 patients seeking or underwent orthodontic treatment were included in the study. Age group selected for the present study was 10 to 16 years. A Simplified Oral hygiene Index was used to determine oral hygiene status. The Debris index and Calculus index for each patient were determined. A self-administered questionnaire was also used to determine the method of oral hygiene practiced and to assess the awareness of oral hygiene. **Results:** good oral hygiene was observed in 63% patients and only 2% had poor oral hygiene. 50% patients brushed twice daily. Use of other oral hygiene aids was common among people. Females were more concerned maintaining good oral hygiene as compared to males. **Conclusion:** increase in oral hygiene awareness among patients seeking orthodontic treatment was evident. Continuous motivation and encouragement can help to maintain oral hygiene in orthodontic patients.

Key words: Oral Hygiene, Orthodontic Patients, Plaque Index, Mouthwash, Awareness

Corresponding Author: Dr. Neeru Chahal, Department of Orthodontics, Tamil Nadu Govt Dental College, Tamil Nadu, India

This article may be cited as: Chahal N, Rana M, Dhawan A, Gulia S. Assessment Of Oral Hygiene Practices And Oral Hygiene Awareness Among Orthodontic Patients . HECS Int J Comm Health Med Res 2018; 4(4):35-38.

INTRODUCTION

A good orthodontic treatment shows its positive effects on the dentofacial complex and esthetics. It not only improves aesthetics but also establishes functional occlusion and most importantly improves the overall oral health. Some authors have suggested that orthodontic treatment helps in building self esteem of an individual.^{1,2} Good oral hygiene is key to successful orthodontic treatment.³ Orthodontic treatment can work as a two edged sword, it can improve the aesthetics as well as harm the periodontium. Placement of fixed orthodontic treatment makes it difficult for patients to maintain oral hygiene. After incitation of orthodontic treatment, if patients fail to maintain good oral hygiene it can lead to accumulation of plaque followed by inflammation. Studies have reported that plaque accumulation is higher in patients wearing fixed orthodontic braces.⁴ Increased risk of caries and gingivitis is observed in patients undergoing orthodontic treatment.^{5,6} Whereas few studies have found that presence of white spot lesions were are higher in fixed appliance patients.⁷ regular brushing, correct technique of brushing, use of mouth wash are very importance for maintenance of good oral hygiene. Complex nature of orthodontic braces prevents appropriate self

cleansing. Lacks of awareness in maintaining good oral health is observed in patients undergoing orthodontic treatment which could be due to lack of knowledge. So we aimed to evaluate the oral hygiene practice and awareness among patients receiving orthodontic treatment.

MATERIAL AND METHOD

A cross sectional study was planned. Sample selected for the study consisted of individuals undergoing orthodontic treatment. A total of 200 patients were selected for the present study, 110 were females and 90 were males. Age groups selected for the study were patients aged between 10 to 16 years. Inclusion criteria for the study included:

1. Patients undergoing orthodontic treatment
2. Age group 10 to 16 years
3. No systemic disease
4. No history of oral prophylaxis at least 4 weeks preceding their examination.

Ethical committee clearance was obtained before stating the examination. A written informed consent was obtained from patients/guardians and patients were explained in detailed regarding the study. Complete oral examination was done with the help of mouth mirror and probe. A self-administered questionnaire was also used and it aimed at oral hygiene practice. Questions were based on daily brushings habits, method of brushing and frequency of changing the toothbrush. Questions regarding the effect of incorrect brushing on the gingiva, presence of sensitivity, type of cleansing aid used, frequency of dental visit, use of mouth wash etc were included.

DATA ANALYSIS

All the data was collected and tabulated. Statistical analysis was done using Statistical Package for Social Sciences (SPSS) version 10. One-way analysis of variance (ANOVA) was used to determine differences at the 5 percent significance level (p<0.05).

RESULTS

In current study a total of 200 orthodontic patients were included. Of the 200 samples 110 were female’s i.e.55% and 90 males i.e. 45% (Table 1). Age groups selected for the current study were patients aged between 10 to 16 years. Oral hygiene status was examined for all the 200 patients with the help of oral hygiene index. The results showed that of the 200 patients 126 patients had good oral hygiene i.e. 63%. Fair oral hygiene was observed in 70 cases i.e. 35%. However of the 200 samples only 4 patients (2%) had poor oral hygiene. This was very less in number (Table 2).No statistically significant differences was observed in oral hygiene status (P>0.05) among the patients. Results showed that frequency of brushing once daily was observed in 28 males i.e. 14% and 38 females i.e. 38%. 33% subjects said they brushed once daily. 40 males i.e. 20% and 60 females i.e. 30% reported that they brushed twice daily. Overall 50% of the selected sample brushed twice daily. In present study it was observed that brushing twice was more common among females as compared to males. Only 22 subject both boys and girls said they brushed 2 to 3 times a day i.e. 11%. Whereas 12 of the 200 patients said they brushed more than 3 times daily i.e. 6% (Graph 1). In present study 44% of the sample reported that they used mouthwash daily. Interdental tooth brush was used by 42.5%, 13.5% used dental floss and 15% used tooth pick regularly (chart 1). Mouth wash was the most preferred cleaning aid however use of Interdental tooth brush was also good. 55/200 patients said the changed their tooth brush in every three months, 62/200 patients preferred changing tooth brush in every 6 months and 83 of the patients said they changed brush in more than 1 year. Overall awareness regarding changing tooth brush was found to be low in present study (Chart 2). Of the 200 patients 112 said they have sensitivity of tooth after incitation of orthodontic treatment (Graph 2).

DISCUSSION

The main goal of orthodontic treatment is to obtain good oral health with satisfactory esthetics. Orthodontist should understand the importance of surrounding tissue and should try to minimize the harmful effect of orthodontic tooth movement. According to the literature various authors have suggested that plaque buildup was more common among bracket wearers and maintain a oral hygiene regime was often difficult.^{8,9} Regular dental checkup has

TABLE 1: PATIENTS DEMOGRAPHIC DATA

Gender	Sample (n)	Percentage
Male	90	45%
Female	110	55%
Total	100	100%

TABLE 2: ORAL HYGIENE STATUS AMONG PATIENTS

OHI Score	n= 200	Percentage
Good	126	63%
Fair	70	35%
Poor	3	5%
Total	200	100%

Graph 1: FREQUENCY OF TOOTH BRUSHING

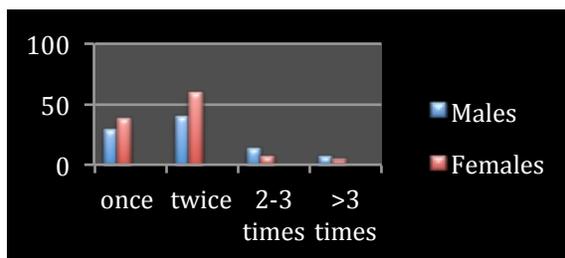


CHART 1: OTHER ORAL HYGIENE AIDS USED

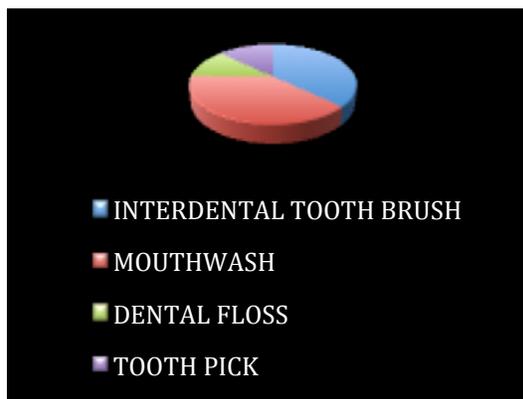
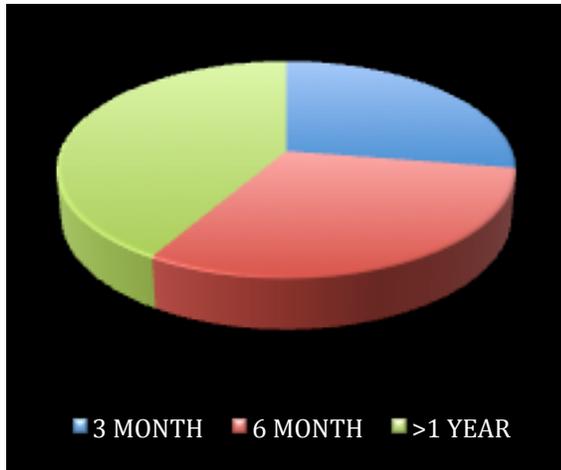
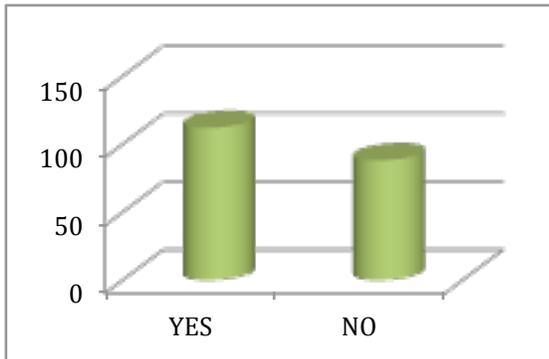


CHART 2: FREQUENCY OF CHANGING BRUSH



GRAPH 2: PRESENCE OF SENSITIVITY AFTER ORTRHODONTIC TREATMENT



been suggested to examine periodontal status in orthodontic patients. In present study only 52% of the selected sample said they always maintained their appointment whereas 48% said they visited their orthodontist rarely. With regards to oral hygiene in present study it was found that 63% patients had good oral hygiene and 35% had fair oral hygiene. Only 2% study sample were found to have poor oral hygiene. Awareness among patients in regards to oral hygiene was found satisfactory in present study. Studies have shown that patients undergoing orthodontic treatment often experiences gingivitis, bleeding gums, gingival enlargement and sometimes even gingival recession or mobility of teeth and this could affect the prognosis of treatment.¹⁰ Thus maintaining good oral hygiene is very important in orthodontic patient. Study conducted by Wang et al suggested that comprehensive oral hygiene care program helped patients to control plaque, decrease gingival inflammation and improve patients' oral health status in their study.¹¹ In current study 50% of subjects reported that they brushed twice daily and 33% brushed once daily. In present study it was observed that brushing twice daily was more common in females. Our study results were similar to those reported by Atassi F and Awartani in their study reported 54% patients brushed twice daily.¹² In present study 44% of the sample reported that they used mouthwash daily. Interdental tooth brush was used by 42.5%, 13.5% used dental floss and 15% used tooth pick regularly awareness among people for the use of other oral hygiene aids was

found to be good in our study. 27.5% patients changed their tooth brush in every three months, 31% patients preferred changing tooth brush in every 6 months and 41.5% of the patients said they changed brush in more than 1 year. Awareness regarding change of tooth brush was found poor in our study. Our results were higher than those reported by Akshara Mary Jacob et al.¹³ in present study 56% complained of sensitivity.

CONCLUSION

Based on the result of present study we found an increase in awareness regarding among oral hygiene in patients undergoing orthodontic treatment. However lack of awareness was observed in regards of change in tooth brush. A satisfactory group of people brushed twice daily. Regular motivational camps should be conducted to demonstrate the correct pattern of brushing. Importance of good oral hygiene should be explained to patients in every visit.

REFERENCES

1. Ellis PE, Benson PE Potential hazards of orthodontic treatment-what your patient should know. *Dent Update* 2002;29:492-96.
2. Shaw WC, O'Brien KD, Richmond S (1991) Quality control in orthodontics: factors influencing the receipt of orthodontic treatment. *Br Dent J* 170(2): 66-68.
3. Da'ameh MD, Al-Shorman I, Al-Shdeifat N, Fnaish MM (2011) Oral hygiene measures in orthodontic treatment in Northern Jordan. *Pakistan Oral & Dental J* 31: 336-339.
4. Travess H, Roberts-Harry D, Sandy J (2004) Orthodontics. Part 6: Risks in orthodontic treatment. *Br Dent J* 196: 71-77.
5. Leggott PJ, Boyd RL, Quinn RS, Eakle WS, Chambers DW. Gingival disease pattern during fixed orthodontic therapy adolescents versus adults. *J Dent Res* 1984; 63 (Special issue): 309, abstract 1245.
6. Zachrisson BU (1984) Periodontal changes during orthodontic treatment. In: McNamara JA, et al. (Eds.), *Malocclusion and the periodontium*, Center for Human Growth and Development, University of Michigan, USA, pp. 268.
7. Hadler-Olsen S, Sandvik K, El-Agroudi MA, Ogaard B (2012) The incidence of caries and white spot lesions in orthodontically treated adolescents with a comprehensive caries prophylactic regimen- a prospective study. *Eur J Orthod* 34: 633-639.
8. Travess H, Roberts-Harry D, Sandy J (2004) Orthodontics. Part 6: Risks in orthodontic treatment. *Br Dent J* 196: 71-77.
9. Hadler-Olsen S, Sandvik K, El-Agroudi MA, Ogaard B (2012) The incidence of caries and white spot lesions in orthodontically treated adolescents with a comprehensive caries prophylactic regimen- a prospective study. *Eur J Orthod* 34: 633-639.
10. Baheti M, Toshniwal N. Survey on Oral Hygiene Protocols among Orthodontic Correction Seeking Individuals. *Journal of Dental Herald*. July 2015 ;3(2):4-8.
11. Wang SY, Yang YH, Chang HP (2007) The effect of an oral hygiene intervention on plaque control by orthodontic patients. *J Dent Sci* 2: 45-51.

12. Atassi F, Awartani F (2010) Oral hygiene status among orthodontic patients. J Contemp Dent Pract 11(4): 25-32.
13. Akshara Mary Jacob et al Oral Hygiene Awareness and Effect of Orthodontic Treatment on Periodontal Health among Medical Students. NUJHS Vol. 7, No.2, June 2017, ISSN 2249-7110

Source of support: Nil

Conflict of interest: None declared

This work is licensed under CC BY: *Creative Commons Attribution 3.0 License.*