Review Article

iMedPub Journals
www.imedpub.com

Journal of Oral Medicine

2017
Vol.1 No.1:8

Personal Recommendations and Tips to Orthodontic Patients: A Systematic Review

Yulia Bogdanova Peeva*

Department of Social Medicine and Public Health, Medical University, Bulgaria

***Corresponding author:**
Yulia Bogdanova Peeva

julipeeva@abv.bg

Faculty of Public Health, Department of Social Medicine and Public Health, Medical University, Plovdiv, Bulgaria.

Tel: 032 602-889

Citation: Peeva YB (2017) Personal Recommendations and Tips to Orthodontic Patients: A Systematic Review. J Ora Med Vol.1 No.1:8

Abstract

The discussion of the issue stresses on the importance of timely information of parents and their children about orthodontic treatment. The physiological limits of maxillofacial growth set boundaries for the correctness of the decision in respect to socio-medical, socio-economic and psychosocial factors. The treatment depends on the clinical assessment of the dentition, and a number of factors. The most important of them are health motivation and health culture. The family foresight in making this decision reflects the direction in which these factors operate. The right time for first consultation with a specialist is also of importance.

The improved dental aesthetics is fundamental to the future realization of a child in the society. The high demand for timely prevention of tooth and jaw deformities and extreme precision available through new technologies and methods allow to improve the ratios between the teeth, lips and jaws and to harmonize the facial features.

Here in Bulgaria exists a crisis in the postgraduate training of specialists that, along territorial and financial access, define the high incidence of untreated cases. The analysis in terms of orthodontic health insurance for children in Europe shows a lack of participation of the health authorities in Bulgaria. Neither the National Health Insurance Fund, nor the private health insurances cover the costs of any type of orthodontic treatment. Patients pay for their own treatment. Alternative funding models for orthodontic health has been proposed. The improvement of the oral health and psycho-social status through timely information and motivation are the benefits sought by the orthodontic treatment.

Keywords: Removable orthodontic appliance; Wear behavior; Time; Hygiene

Received: November 02, 2017; **Accepted:** November 09, 2017; **Published:** November 19, 2017

Literature Review

Prevention of the child up to 7 years of age and first orthodontic consultation

The smile is the greeting to the world. Not everyone is born with beautiful teeth. Distorted teeth and improper bite can result not only in functional disturbances but also to increase the shame, uncertainty and lasting psychological consequences.

There is a trademark "a healthy smile, it is good for life" (a healthy smile that is useful for life). To achieve a healthy smile the teeth must be clean and properly positioned.

Many types of orthodontic appliances are commonly used in everyday orthodontic practice. The treatment success is based on the patient's wearing the appliance as instructed and also from his motivation and cooperation. The positive compliance includes both wear time (enough number of hours per day and night) and wear behavior. The third very important factor to support the oral health of the child is appliance's hygiene.

Wear behavior is related to whether the appliance was worn every day or whether there were days when the appliance was not worn. Studies have shown that a majority of patients may not wear their appliance as instructed; hence, patient motivation is the highest of priorities when using removable appliances [1].

The Bulgarian Orthodontic Society (BOS) recommends the first consultation with orthodontist at the age of 7. This is the age

of mixed consciousness, but the number of permanent teeth is sufficient to predict complications in growth and to undertake treatment. Turning off full tooth replacement without counseling with orthodontist is an incorrect choice for the child's health. So earlier the need for orthodontic treatment is, the easier it will be to solve the problems without future complications [2]. In the younger age of the child, it is possible to adequately correct the tooth-jaw deformations only with removable appliances. This treatment is significantly cheaper than fixed orthodontic treatment. Early orthodontic treatment also has other advantages - after completion of facial and maxillary growth, the orthodontist may not achieve good results as is possible in early treatment.

The choice of optimal treatment time depends on the recommendation of the orthodontist - most commonly orthodontic treatment is conducted between the ages of 8 and 14, but some bite abnormalities are better affected at an earlier age. Early treatment allows the orthodontist:

- To reduce the risk of frontal teeth fracture;
- To guide the growth of the jaws;
- To correct harmful habits;
- To improve vision and self-esteem;
- To place permanent teeth in their most favorable position;
- To improve the way the lips meet [3].

Hygiene prophylaxis

Oral hygiene of orthodontic patients - how to keep the teeth clean longer: This condition is not recommended but obligatory! Tooth cleaning strategy. The plaque is a sticky, colorless, fixed film on the teeth. It is composed of bacteria, Candida, food debris and saliva. When there is a plaque and food residue on braces, it is possible that they cause caries, sore gums, bad breath, and permanent stains on the teeth. Regular cleaning with toothbrush and flosses and mouthwashes will keep the teeth and gums in perfect condition. This is a guarantee that after the orthodontic treatment the patient will have the strongest teeth with the most beautiful smile. Here are some rules to achieve this result: The responsibility for cleaning the teeth and braces is personal of the child.

The process control

Control of the whole process depends not only from the dentist but from the parents, too. The dentist may check the level of the hygiene one's at month but the parents should control their children at home every day. That's why the orthodontist has to educate parents how to follow personal recommendations in orthodontic treatment. In this situation all of the orthodontists have to increase the motivation and to look for the cooperation and support of the kid [4].

Some of the possible difficulties in maintaining oral hygiene are:

- If the child is not aware of how to brush his teeth, the dentist should gives him oral hygiene instructions;
- The role of the parent is to maintain control over the effectiveness of hygiene;
- After eating, especially snacks, chips, jam or junk foods, the brushing teeth immediately can sometimes affect the enamel negatively. The patient should avoid brushing at least 30 min or has to rinse the teeth with plain water or with mouth water.

The best and easy personal recommendations for orthodontic patients include four steps:

- The teeth should be cleaned twice a day with a fluoride toothpaste for about 5 minutes per time – early in the morning and before bedtime;
- Advice parents and the kid how to floss the teeth – usually at bedtime;
- Aware patients that they have to change their eating habits – to limit the number of times the child eat snacks;
- Last but not at least, to visit their dentist for an oral exam and professional cleaning.

Cleaning of removable orthodontic appliances (ROAs)

Some authors distinguished between professional and personal hygiene measures, while other authors differentiated between mechanical and chemical methods [1,5]. Mechanical methods include brushing (with water, toothpaste or abrasive adjuvants) and immersion into an ultrasonic bath with or without chemical additives. The children wearing removable orthodontic appliances should clean them every day as dental plaque also adheres to the appliances.

The most frequent recommendations are:

1. Mechanical cleaning with a toothbrush and soap;
2. Chemical methods.

Some of the most commonly used chemical detergents are:

- "Corega tabs";
- "Dental duty tabs";
- "Ortho-clean orthodontic appliances";
- "Retainer brite";
- "Smile Again";
- "SmartGuard Cleaner";
- "Medical Ortho-Junior;
- "Protefix";
- "Fitty dent";
- "Rapident";
- "Puridentˮ
- "Cetron", etc.

1. Diluted vinegar or citric acid and potassium bicarbonate (saleratus).

Food prophylaxis

Recommended diet in children performing braces – healthy alternatives "You are what you eat": This phrase has come to us via quite a tortuous route. Anthelme Brillat-Savarin wrote, in **Physiologie du Gout, ou Meditations de Gastronomie Transcendante,** 1826.

Information related to nutrition guidelines should be followed by both parents and the child. Orthodontic treatment in adolescents is associated with the introduction of an appropriate diet, but it is inappropriate to require food constraints from the child during his or her growth. Orthodontic patients and their parents need to pay attention to the quality and consistency of the diet in order to perform orthodontic treatment in optimal terms with the best possible result [6]. From the other side, more serious complications are the formation of caries or damage of used orthodontic apparatus. The child and parents should be informed about recommended foods during orthodontic treatment:

Recommended and authorized foods

- Fruits and vegetables, which are finely chopped, uncooked (ex. whole apple or whole carrot);
- Milk, soups, tartar, liquids;
- White cheese yellow cheese;
- Unsweetened natural juices, not of a box, but of fresh juice;
- Pasta, rice, potatoes;
- Fish, meat, finely chopped, not trimmed by bone or rebar;
- Thick chips;
- Chocolate without nuts - fine milk or aerosol;
- Prohibited foods;
- Chewing gums;
- Hard caramelized candies;
- Jellybeans;
- Hard chips - tortillas, popcorn;
- Items - pencils, chemicals, ice cubes.

The first week

The appliance is generally cleaned twice a day - in the morning and the evening to remove the plaque. The patient can use a toothbrush and some detergent to clean every surface of the appliance. After cleaning and brushing the teeth, the appliance can be put into the mouth again. The appliance is pulled out of the mouth, and then the child should brush the teeth between 5 and 10 minutes. The patient must clean the clamps in running water and using a detergent. On the other hand, cleaning ROAs can be difficult. The screw wire and metal elements should be thoroughly cleaned, so the calculus and plaque also should not be allowed to accumulate at the same time. The smooth sides of the appliance retain fewer food residues, while the rough and around the screw retention are more.

The patient should not feed with the appliance because of damage.

Important note

When the orthodontic appliance is not worn, it should be cleaned and immersed in a cup of water with a spoon of mouthwash.

Wear-time assessment of removable orthodontic appliances

Patients do not always adhere to the wear times prescribed for removable orthodontic appliances. Orthodontic patients aged between 8 and 14 years treated with removable appliances such as functional appliances and expansion and retention plates have to be discussed for optimal wearing time. The therapeutic success of removable appliances is primarily dependent on adhering to the wear-time prescription provided by the practitioner. The extent to which the length and regularity of daily wear times influence the therapeutic progress depends from individual peculiarities and both age and sex of each patient. However, wear-time adherence of individual patients is highly variable [7,8].

Discussions

There are two major problems challenging successful orthodontic treatment with removable appliances: 1) patients do not adhere to prescribed wear times, and 2) inaccuracy assessment of patient's individual characteristics. It means that in some of the cases can be discussed personal behaviors, psychological, educational and cultural factors Future studies will need to investigate how to motivate the patient and enhance patient adherence. Orthodontist assessment of wear time based on clinical parameters did not markedly differ from patient-estimated wear times. Due to the wide distribution of wear times the single standard wear-time prescription applied to all patients does not capture adequately individual characteristics of the patient.

Conclusions

Compliance with removable orthodontic appliances and adjuncts is suboptimal, and patients routinely overestimate duration of wear. Techniques for improving compliance have promise but require further evaluation in high-level research. Parents should take their responsibility to control the wearing and hygiene of the apparatus. The child is responsible for wearing, hygiene, and shielding. After the initial consultation, the leaflets (brochures) are an invaluable source of information for the patient; A huge problem is that the terminology used in the leaflets is incomprehensible for most of the parents. Treatment should be based on a benefit-risk analysis; the risk must be minimized and manageable. Patients should be engaged in treatment.

References

1 Petren S, Bjerklin K, Marke LA, Bondemark L (2013) Early correction of posterior crossbite - a cost-minimization analysis. Eur J of Orthodontics 35: 14-21.

2 Ukra A, Bennani F, Farella M (2011) Psychological aspects of orthodontics in clinical practice. Part one: treatment-specific variables. Progress in Orth 12: 143-148.

3 Bos A, Hoogstraten J, Prahl-Andersen B (2005) Attitudes towards orthodontic treatment: a comparison of treated and untreated subjects. Eur J of Orthodontics 27: 148-154.

4 Agar UC, Doruk C, Bicakci A, Bukusoglu N (2005) The role of psycho-social factors in headgear compliance. Eur J of Orthodontics 27: 263-267.

5 Tessarollo R, Feldens A, Closs Q (2012) The impact of malocclusion on adolescents' dissatisfaction with dental appearance and oral functions. The AO 82: 403-409.

6 Ajayi E (2011) Dental aesthetic self-perception and desire for orthodontic treatment among school children in Benin City, Nigeria. NQJHM 21: 45-49.

7 Krey KF, Hirsch C (2012) Frequency of orthodontic treatment in German children and adolescents: influence of age, gender, and socio-economic status. Eur J of Orthodontics 34: 152-157.

8 Wang J, Tang X, Shen Y, Shang G, Fang L, et al. (2015) The correlations between health-related quality of life changes and pain and anxiety in orthodontic patients in the initial stage of treatment. BRIJ, p: 7.