Malocclusion in Orthodontics and Oral Health [1]

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Context

This policy statement highlights the relation between malocclusion in orthodontics and oral health, with special reference to the FDI's definition of oral health as "multi-faceted and includes the ability to speak, smile, smell, taste, touch, chew, swallow and convey a range of emotions through facial expressions with confidence and without pain, discomfort and disease of the craniofacial complex"[1].

Not each malocclusion needs treatment. Indices such as the Index of Orthodontic Treatment Need (IOTN), the Dental Aesthetic Index (DAI) or others are used to determine the need or priority for orthodontic treatment, ranking from "no need or little need" to "essential treatment". In the latter, for example lip and/or palate cleft, malocclusion is a common health problem that may affect oral health by increasing dental caries prevalence, periodontitis, increasing risk for trauma and difficulties in masticating, swallowing, breathing and speaking[3].

Malocclusion may cause patients to feel uncomfortable about their dental and facial appearance during social interactions[2]. Many people seek orthodontic treatment for aesthetic improvement, not because of its positive impact on function, oral health?overall general health and well-being.

Scope

This policy statement addresses the importance of orthodontic treatment as an integral part of dentistry for physiological, psychological, psychosocial, functional and dental reasons under strict consideration of the severity of the case, the respective individual impairment and the available resources.

Definitions

Malocclusion: irregularity of the teeth or a mal-relationship of the dental arches beyond the range of what is accepted as normal[4]

Index of Orthodontic Treatment Need (IOTN): rating system used to assess the need and eligibility of children under 18 years of age for UK National Health Service (NHS) orthodontic treatment on dental health grounds, specifically designed to identify problems of malocclusion that affect oral health and are not cosmetic

Dental Aesthetic Index (DAI): index that evaluates 10 occlusal characteristics: and has four stages of malocclusion severity: "no or slight treatment need, elective treatment, treatment highly desirable and treatment mandatory"[6]

Principles

By considering malocclusion not only as an aesthetic problem, orthodontic treatment can prevent and intercept further oral diseases and improve the quality of life.

Policy

As orthodontics is an integral part of dentistry, FDI supports the following statements:

1. The interrelation of malocclusion, oral and general health should be taught in dental education such as malocclusion and periodontitis or caries and potential for traumatic damage of teeth and airway obstruction with all consequences.
2. After proper diagnosis, based on clinical and radiographic examination the dentist should inform the patient properly about the influence of malocclusion where it is of such severity that hygiene challenges may cause premature loss of teeth, or where function and/or aesthetics are seriously compromised.
3. The dentist/orthodontist should consider dental and medical histories, and the patient's behavioral, psychological, anatomical, developmental and physiological limitations that may affect the treatment and prognosis of malocclusion.
4. The public should be informed that orthodontic treatment must be supervised under full responsibility of orthodontists or qualified dentists (dentists with relevant orthodontic education and suitable training).
5. The provision of "do it yourself" or "direct to consumer" orthodontic appliances, and where there is no direct interaction with orthodontists or qualified dentists, may have a significant adverse impact on patients' oral health and must be proactively prevented.
6. Close cooperation with other health professions (e.g. nurses, paediatricians, speech therapists maxillo-facial-surgeons) may be necessary and will help to improve the treatment result and benefit for patients.
7. Public or private oral health insurance policies and third-party payers should acknowledge the need for and contribute financially to orthodontic treatment that is necessary in line with the FDI definition of oral health.
8. Further research on the relationship of malocclusion with oral health and general health should be undertaken.

Disclaimer

The information in this Policy Statement was based on the best scientific evidence available at the time. It may be interpreted to reflect prevailing cultural sensitivities and socio-economic constraints.

References

1. FDI World Dental Federation. FDI Definition of Oral Health, 2016. Available online: https://www.fdiworlddental.org/oral-health/fdi-definition-of-oral-health [2]. Accessed 15 January 2018.
2. Proffit W R. Contemporary Orthodontics Edition, 2013. Elsevier LTD, Oxford.
3. Mtaya M, Brudvik P, Astrom AN, 2009. Prevalence of malocclusion and its relationship with socio-demographic factors, dental caries and oral hygiene in 12 to 14-year-old Tanzanian school children. *European Journal of Orthodontics*; 31: 467–476.
4. Jacobson, Alex, 1987. DAI: The dental aesthetic index. *American Journal of Orthodontics and Dentofacial Orthopedics*; Volume 92, Issue 6, 521 - 522

Dental Practice Committee [3] **Classification:** Dental care [4]
Oral health [5]

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Links
[1] https://www.fdiworlddental.org/resources/policy-statements/malocclusion-in-orthodontics-and-oral-health
[2] https://www.fdiworlddental.org/oral-health/fdi-definition-of-oral-health
[3] https://www.fdiworlddental.org/standing-committees/dental-practice-committee
[4] https://www.fdiworlddental.org/policy-statement-classification/dental-care
[5] https://www.fdiworlddental.org/policy-statement-classification/oral-health