



## General



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## EPHEBODONTICS: THE TEEN DENTISTRY

General

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### ABSTRACT

Ephebo dontics is the term for adolescent dentistry and adolescence is an intermediate developmental period with numerous marked changes among which oral health care needs receives least importance. The dental needs of this age group are complex and multifaceted due to their associated emotional, physical and psychological changes. Therefore this age group should be handled by those dentists who can take care of their dental and non-dental needs. This paper attempts to address the various dental needs including oral health related quality of life, periodontal problems, dental caries, malocclusions, dental traumas, substance abuse, child abuse, their treatment considerations and management protocols.

**KEYWORDS:** Adolescence, Dental needs, Psychological changes, Dentists, Treatment considerations.

### INTRODUCTION

Ephebodontics is the term coined for adolescent dentistry in the April 1969 issue of Dental Clinics of North America. 'Adolescence' is an intermediate phase of development from childhood to adulthood which is chronologically between 10-19 years of age but subjected to variations.<sup>1</sup> During this unique developmental period the adolescent will have many marked changes amongst which oral health receives the least importance. Adolescence is a critical period for dentists as it is associated with increased caries activity, compromised periodontal health, malalignments and increased incidence of orofacial traumas.

### OVERVIEW

Oral health has a huge impact on the quality of life of the adolescent including self-esteem, social interaction and job performances. Oral health related quality of life (OHRQL) is a multi-directional construct that includes a subjective evaluation of individuals' oral health, functional and emotional well-being, expectations and satisfaction with care and sense of health. It focuses on patient's social and emotional experience, physical function, along with appropriate treatment goals as well as outcomes.<sup>2</sup> Oral health has both positive and negative implications on life. Positive oral health status gives happiness and confidence, whereas negative scenarios like craniofacial anomalies, aggressive periodontitis, early childhood caries, and oral cancers will have a negative impact on the well-being of the adolescent. According to Wilson and Carley model<sup>2</sup> for OHRQL, there are various factors like speech, oro-facial appearance, psychological status, socio-cultural factors, education and family structure that affect the oral health perception and related quality of life. Similarly, the model for OHRQL by Lopez in 2003, focuses on overall human strength and ability to cope the dental treatment and its positive or negative outcomes.<sup>2</sup> Moreover, marketing strategies of the oral care products such as highlighting attractive smiles and white teeth as the markers of aesthetics, also has its effect on adolescent minds.

The hormonal, emotional and psychological changes of adolescence have its marked manifestations on the periodontium. Gingival changes like puberty gingivitis is of most importance. It is a condition due to magnified inflammatory response to local irritants caused by hormonal changes which presents with gingival bleeding. Gingivitis when left untreated along with poor oral hygiene, dietary habits, anxiety, hormonal changes, lack of knowledge, socio-economic status leads to commencement of periodontitis and is not entirely an adult disease. Aggressive periodontitis is yet another general disease of this age group. Other gingival problems associated with adolescence are acute necrotizing ulcerative gingivitis, infectious mononucleosis, recurrent aphthous stomatitis,<sup>3</sup> gingivitis associated with pregnancy<sup>4</sup> and contraceptives.<sup>5</sup>

The incidence of caries is high during adolescence owing to lack of oral hygiene, eruption of permanent teeth, increase in proximal surfaces etc. Adolescent rampant caries is another challenge in the oral health of this age group. It is a suddenly appearing, rapidly burrowing type of caries resulting in pulp involvement, in which more than ten new lesions appears every year on healthy tooth surfaces which are generally immune to caries.<sup>6</sup> The etiology includes frequent intake of cariogenic diet and carbonated drinks. The prevalence of dental caries in India according to 2016 survey is 49% for 12 years and then it steadily increases to 60% by 15 years.<sup>7</sup> Fluoride application, pit and fissure sealants, proper oral hygiene instructions, fluoride containing toothpastes and mouth rinses can be used as preventive measures to reduce the incidence of caries.

Malocclusion is also a common problem among adolescents. The reasons can be varying including genetics, childhood habits, trauma and early exfoliation of deciduous teeth. Except for genetics, other reasons can be eliminated by early intervention by dentists. Since the adolescent falls in the growth period, this natural growth can be harnessed with orthodontic treatment to guide the teeth and jaw into an ideal position. Also, space maintainers, and habit breakers can also be given to eliminate the etiology of malocclusion.

Adolescents are at a high risk of trauma due to contact sports, traffic accidents, work accidents and violence of which a higher percentage are orofacial traumas. The most common orofacial sports related injuries include both soft tissue injury or hard tissue injury like lacerations, bruising, contusions, teeth intrusion, avulsion, crown and/or root fracture, luxation and facial bone fractures.<sup>8</sup> Preventive measures like mouthguards, helmets, protective gears and trauma treatments like pulp capping, replantation of avulsed teeth and endodontic therapy are to be done by dentists.

The urge of adolescents to experiment new things in life ends up in substance abuse, which is increasing at an alarming rate in India. Substance abuse includes alcohol, tobacco, and drugs like opioids, benzodiazepines and marijuana. It is commonly associated with detrimental psychological, nutritional, and social changes, any of which can markedly affect the general and oral health of the individual user and results in lack of motivation and self-interest which adversely influences the compliance to oral hygiene procedures and keeping appointments.<sup>9</sup> The oral manifestations of substance abuse includes leukoplakia and oral lichen planus associated with tobacco and hyperpigmentation of oral mucosa in parenteral drug abusers and in such cases dentist will be the first to suspect these abuses. Also parenteral drug abusers should be suspected for infections like HIV, hepatitis A, Hepatitis B and Hepatitis C.

Child abuse including both physical and sexual will have oral manifestations which is of forensic importance. It includes bruises, lacerations, burns, fractures, oral and perioral syphilis and gonorrhea, bite marks and dental neglect.



Various meditation and yoga techniques which include breathing exercises, behavior management courses and muscle relaxations can be advised to help the adolescent to cope with stress and anxiety. As per Linehan (1993), behavior modification techniques like Dialectic Behavior Therapy (DBT) which begins by emphasizing a "dialectical" approach to behavior change, encouraging an individual to accept himself or herself as they are in the present within the context of reshaping their cognitions and changing their future behavior. Thereby DBT addresses maladaptive behaviors by teaching emotional regulation, stress tolerance and self-management skills.<sup>11</sup>

THE CONCLUSION

By understanding the complex nature of dental diseases and the distinguished behavioral pattern of adolescents, dentists should emphasise more on a psychological approach towards this particular age group. Moreover, Ephebodontics should be made an integral part of the dental curriculum.

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