

Short Communication

Severe caries: A clinical dilemma

Hansa Jain, Rahul Kathariya* and Sanjyot Mulay

Department of Periodontology and Oral Implantology, Dr. DY Patil Dental College and Hospital, Dr. DY Patil Vidhyapeeth University, Pimpri, Pune- 411018, India.

Accepted 13 October, 2019

The microbial etiology of dental caries is discussed in terms of the dynamic relationship among the dental plaque microbiota, dietary carbohydrate, saliva, pH lowering and the cariogenic potential of dental plaque. Herein, a case is presented in which the main cause of the caries for this pampered patient was compromised oral hygiene maintenance, after a history of a severe accident, in which he lost his digits. This case report emphasizes the proper evaluation of history, which leads to proper diagnosis and treatment planning. Educating people about the etiopathology and introduction of preventive and maintenance strategies does not only assist in meeting the special oral needs of the adolescent population, but also helps to establish lifelong healthy habits.

Key words: Dental caries, caries, etiology, plaque.

INTRODUCTION

Oral diseases are a universal problem, but they are often a low priority for health policy-makers due to the absence of any alarming consequences. However, they can affect individuals severely due to their impact on psychological and social aspects of one's life (Chen and Hunter, 1996). The predominant reasons which affect psychological and social aspects of any individual are aesthetics, in case of anterior carious involvement and inability to masticate properly due to posterior teeth involvement.

The plurality of factors involved and the otherwise durable nature of tissues invaded make dental caries one of the most unusual diseases, which, once established is perpetual and does not confer immunity. It involves all population groups in the world with divergent intensity from caries free to rampant caries (Utreja et al., 2010). But despite hundreds of research investigations, its aetiology is still perplexing. Dental caries is a diet bacterial disease resulting from interactions among a susceptible host, cariogenic bacteria and cariogenic diet as stated by Tanzer et al. (2001).

The world health organisation (WHO) recognises dental caries as a pandemic disease affecting all age groups in almost similar frequency (Gathecha et al., 2012), but a study by Majewski states that due to the presence of various unique factors present in the teenage years, the prevalence of caries is more in the adolescent years (Siu et al., 2002). Here, we present a case of severe caries seen in an adolescent individual who suffered from high caries index which along with other factors led to development of psychological and social inferiority in this young fellow.

CASE REPORT

Herein, a case is presented in which there is severe involvement by caries of multiple permanent teeth in a 23-year-old male, who reported complaints of pain, inability to chew and various decayed teeth.

On clinical examination, we found grossly destructed teeth with a decayed, missing and filled teeth (DMFT) of 20 (D = 16; M = 5; F = 0) with generalized gingivitis. A general physical examination revealed a mesomorphic stature, well nourished and a fingerless right palm, which he lost in an accident 12 years back. However, the appearance of his teeth posed a psychological problem: he lacked self-confidence and hesitated in smiling freely (Figures 1 and 2).

*Corresponding author. E-mail: rkathariya@gmail.com. Tel: +918983370741.



Figure 1. Maxillary arch showing the number of decayed, missing, filled and treated teeth.



Figure 2. Mandibular arch showing the number of decayed, missing, filled and treated teeth.

The patient suffered from:

1. Proximal carious lesions with 11, 12, 13, 21, 22, 23, 34, 35;
2. Occlusal carious lesions with 26, 27, 38, 47, 48;

3. Deep occlusal carious lesions with 17, 18;
4. Root pieces: 25; and
5. Missing teeth: 15, 16, 36, 37, 46.

DISCUSSION

Being the only offspring to his parents, and the only survival of the mishap, he was a pampered kid. The parents gave into his every demand and supplied him daily with chocolates and candies, totally ignorant of the fact that it will hamper his oral health in near future. We also perceived that the boy was a right handed individual and had lost his right hand digits. He was not able to maintain proper oral hygiene, as it would have been difficult for him to brush properly with his left hand (Figure 3). Moreover, psychological reasons, hospitalisation and medications also contributed to the cause.

It has been observed that sugar-containing syrups are potentially cariogenic. Together with poor oral hygiene, the consumption of this sugar-containing syrup can lead to formation of rampant caries (Siu et al., 2002), as also contemplated in this case. The boy being an adolescent at that time was given his medication in the form of oral syrups, which would also have accounted to decreased pH of the oral cavity.

As we tallied the dates of the onset of caries in his oral cavity, we found that they coincided and followed the time after his unfortunate accident. This made us conclude that the days of adolescence play a crucial role in development of rampant caries in otherwise healthy individual. In this situation, increased intake of sticky carbohydrates, inability to maintain proper oral hygiene



Figure 3. Amputated digits of the right hand.

as well as medicated sugar syrups, all lead to the decay of 62.5% teeth of this young boy.

In this situation, in addition to routine restorative treatments, we thought it is important to educate the patient about different ways to maintain proper oral hygiene so that his remaining teeth can be saved. We advised him to use an electrically powered toothbrush, abstain from chocolates and candies, to get regular oral prophylaxis and follow up along with fluoride supplements.

Conclusion

Conclusively, we would like to emphasize on the importance of taking not only proper case history, but also its critical correlations with the concerned disease, since both play a substantial role in the diagnosis and management of the disease and the patient.

ACKNOWLEDGEMENTS

The authors would like to thank the patient and his family for their cooperation.

REFERENCES

- Chen MS, Hunter P (1996). Oral health and quality of life in New Zealand: A social perspective. *Soc. Sci. Med.* 43:1213-1222.
- Gathecha G, Makokha A, Wanzala P, Omolo J, Smith P (2012). Dental caries and oral health practices among 12 year old children in Nairobi West and Mathira West Districts, Kenya. *Pan Afr. Med. J.* 12:42.
- Tanzer JM, Livingston J, Thompson AM (2001). The microbiology of primary dental caries in humans. *J. Dent. Educ.* 65:1028-1037.
- Siu AS, Chu FC, Yip HK (2002). Cough syrup addiction and rampant caries: A report of two cases. *Prim. Dent. Care* 1:27-30.
- Utreja D, Tewari A, Chawla HS (2010). A study of influence of sugars on the modulations of dental plaque pH in children with rampant caries, moderate caries and no caries. *J. Indian Soc. Pedod. Prev. Dent.* 28:278-281.