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| **Name:** |
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| **Group:** |
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| **Pathology Question:** |
| What are the effects of a constant acidic environment due to diet on the teeth? |
| **Report:** |
| The pathology of dental erosion and tooth decay related to soft drinks is considered to be major problem considering a high percentage of the population consumes soft drinks on a daily basis. Soft drinks contain a lot of sugar and can have a low pH which can lead to enamel erosion and tooth decay. Dental erosion can be defined as chemical erosion of the dental hard tissue. Acids are the main etiological factor that leads to erosion. Soft drinks contain a combination of acids and sugars that are acidogenic and carcinogenic and lead to rampant caries and dental erosion. Frequent intake of soft drinks exposes the teeth to prolonged contact with sugar and can increase the likelihood of developing caries.  Dental caries is a multifactorial chronic disease that can be influenced by factors such as oral hygiene, diet, sugar intake, bacteria, saliva, and amount of fluoride exposure, and genetics. Frequent exposure to carbohydrates and the method of carbohydrate intake has been shown to play a significant role in the expression of caries. Dental erosion is also shown to be related to how frequently the dental hard tissue gets exposed to acidic fluid. Constantly drinking soft drinks keeps pH in the mouth low and increases the likelihood for dental erosion and development of caries. This environment can also promote slowly developing caries to turn into rampant caries.  If the patient continues to frequently consume soft drinks and also have poor oral health hygiene, full mouth implants are not the best option for this patient. The implants have an increased chance to fail and a denture is recommended instead as well as better instructions on oral hygiene and diet is suggested to preserve his mandibular anterior teeth and to maintain the denture. |
| **References:** |
| Cheng, R., Yang, H., Shao, M. Y., Hu, T., & Zhou, X. D. (2009). Dental erosion and severe tooth decay related to soft drinks: a case report and literature review. *Journal of Zhejiang University. Science. B*, *10*(5), 395–399. https://doi.org/10.1631/jzus.B0820245  Mishra, M. B., & Mishra, S. (2011). Sugar-Sweetened Beverages: General and Oral Health Hazards in Children and Adolescents. *International journal of clinical pediatric dentistry*, *4*(2), 119–123. https://doi.org/10.5005/jp-journals-10005-1094  Tahmassebi JF, Duggal MS, Malik-Kotru G, Curzon ME. Soft drinks and dental health: a review of the current literature. J Dent. 2006 Jan;34(1):2-11. doi: 10.1016/j.jdent.2004.11.006. Epub 2005 Sep 12. PMID: 16157439. |