Mayan Dental Aesthetics

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Tooth Morphology

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As a dental professional, it is very important to understand the history and different perceptions of Restorative Dental Aesthetics. Cultures throughout the world have different views on what “beautiful teeth” are, and what may be socially accepted. To get a better understanding, I have decided to expand my knowledge of Mayan civilization perception of dental aesthetics and compare it to American cosmetic dentistry.

As Margaret Hungerford stated "Beauty is in the eye of the beholder". What may be beautiful to one person or group may be the complete opposite to another. The modern day American considers “perfectly shaped and aligned white teeth” as a beautiful smile. On the other hand, the Mayan believed dental mutilations and incrustations expressed beauty and social rank.

The Mayans practiced different types of mutilations, including filing of teeth into points and cross-hatching patterns on facial surfaces of the teeth. Teeth were filed into rectangles and drilled with small holes to insert small round pieces (resembling inlays) of jadeite, hematite, pyrite, turquoise and different organic substances. Archaeologists believe that incrustations were practiced when the person reached the age of 15 and filing occurred throughout adult life. Filing the teeth was found to be more common among females and the inlaying of jewels was more common in males but both practices were found between each gender. It is believed that hardened bone drills with water and sand were used to form the holes for inlays in teeth.

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Why did the Mayan modify their teeth? There are different possibilities that may explain why these mutilations and painful incrustations were performed. It is stated that some incisors were “T shaped” because it stood for wind and a personification for life force. The Mayan also believed that jade was able to purify breath and gave them ability to speak fluently. Hematite on the other hand created a hard, glossy look among the teeth. To produce a numbing effect similar to the effect of lidocaine, which is used in modern dentistry, several plants found in Belizean forests were used to perform the procedures.

Even though these were all just cosmetic or aesthetic modifications, there were some favorable effects, like tooth decay prevention/restorations (inlays). However, sometimes these procedures were somewhat harmful. Some Mayans developed periapical abscesses, damage to the pulp cavity, and even tooth loss due to jadeite incrustations.

Looking back about 1500 years ago, Mayans were already practicing restorative dentistry. The civilization used the earliest known examples of dental implants. Parts of mandibles found while excavating Mayan burial sites in Honduras which consisted of three tooth-shaped pieces of shell placed into sockets of missing teeth. It was believed that these shells were placed after death as a form of observance but studies showed compact bone formation around two of the implants. This concludes that they were placed during the person’s life, not after death.

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Comparing Mayan dental aesthetics to American dental aesthetics, there are many similarities. Although the Mayan modified their teeth for ornamental purposes only, Americans followed and still follow similar procedures. The insertion of jadeite is much related to dental inlays. An inlay is a solid filling that is cemented into a tooth that has been specifically prepared for a certain tooth. Most inlays are made of gold or tooth-colored porcelain.

In conclusion, as a dental lab technician, it is important to understand the different perceptions of dental aesthetics throughout the world. Cosmetic dentistry can relate as well as differ very much within cultures, affecting the career of any dental professional. Being aware of these differences can benefit our professional life in the sense that we may be able to improve the field of dental restorations.

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