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Writing Assignment 2

Den 1100 Section OL10

Part 1: Understanding Gingivitis and Periodontitis

Gingivitis is a form of gum disease that results from the accumulation of plaque on the tooth's surface and underneath the gumline. Plaque contains toxins that irritates the gums, causing them to become inflamed and bleed when agitated. Other major signs and symptoms of gingivitis are sore gums, tooth sensitivity to hot and/or cold, loose teeth, and bad breath. Other than poor oral hygiene, factors that may increase the risk of gingivitis include tobacco use, stress, medications that may cause Xerostomia (dry mouth), chronic diseases, and poor nutrition. Contrary to popular belief, Gingivitis is very common. Three out of every four Americans will have gingivitis at some point in their life. Gingivitis is easily reversible by practicing good oral hygiene. However, if Gingivitis is not treated, it can develop into a disease much worse, which will require intervention from a dental professional.

When Gingivitis is not dealt with in a timely manner, it will develop into Periodontitis. Periodontitis is a severe gum infection that damages the gums and may lead to tooth decay, dental caries, and a loss of alveolar bone that supports the tooth. Unlike Gingivitis that can be cured by the patient by practicing good oral hygiene daily, Periodontitis is irreversible. Periodontitis must be treated by a dental professional by way of deep cleaning underneath the gumline, scaling and root planning, root debridement, and in more severe cases, surgery. That is why it is imperative that Gingivitis is caught in its early stages, before it can progress into this severe disease.

As a clinician, the tips I can provide my patient to prevent Gingivitis are simple. I would advise them to practice good oral hygiene by brushing their teeth at least twice a day, flossing at least once a day, and use an antiseptic mouthwash to decrease the number of bacteria in the mouth. Also, I would advise them to avoid eating sugary foods periodically throughout the day, as that increase the chances of developing caries. One thing I did learn that I can tell my patients, is that the risk of Gingivitis increases the more stressed a person is, the weaker their immune system becomes, which can lower their ability to fight off an infection. Also, hormonal changes have an impact on the sensitivity of the gums. During times of puberty, menopause, and pregnancy, one must take extra care of their teeth to prevent gum disease (Crest, 2021).

Part 2: Toothbrushing (TB) Methods and Types

When it comes to toothbrushing, the most popular and recommended method is the Modified Bass method. This method is one I would provide to patients as a tip to brush all their teeth. The Modified Bass method is easy for patients to learn. Also, it removes plaque and cleans under the gumline and interproximal spaces effectively. While performing the Modified Bass Method, the bristles cover two to three teeth at a time, making it an efficient way to clean

multiple teeth at a time. To ensure that a patient brushes all their teeth, I would advise that they start at the most posterior tooth in one quadrant to the most posterior tooth in the next quadrant. For example, I would advise that the patient start brushing on tooth #1, and work their way around to tooth #16, and tooth #17 to tooth #32. Also, I would advise them to brush at least 2-3 minutes.

Proper care of a toothbrush is very important. A frayed toothbrush is less effective for cleaning the teeth and underneath the gumline. A toothbrush should be rinsed after use, completely clean of visible debris, dentifrice, and bacteria between the filaments (Wilkins, 2021). Toothbrushes must be kept in an upright position in an open-air environment, away from other toothbrushes (especially those belonging to others), to allow the bristles to dry thoroughly between uses. Ideally, toothbrushes should not be stored in a container prior to drying because doing so may facilitate an environment for bacteria to grow. It is okay to store your toothbrush inside a container after it has dried completely.

According to the ADA, it is recommended that a toothbrush be replaced every 2-3 months. Upon visual inspection, if the toothbrush filaments become frayed or splayed in any way, it should be replaced immediately, regardless of if it has been 2-3 months. This is because the effectiveness of the toothbrush will decrease significantly. Furthermore, a toothbrush should be replaced if a person had an infection or virus. Toothbrush sanitizers have limited evidence of benefit (Wilkins, 2021), so it is better to replace than try to disinfect the brush.

There are two types of toothbrushes, manual and electric. Although they share many differences, they are composed the same. All toothbrushes are composed of a head, which is the working end that contains the filaments, a shank, which connects the working end to the handle, and handle, the part that is grasped by the user. Filaments that can be flat, rippled, multilevel, tapered, or bilevel-orthodontic. The differences are a manual toothbrush is used, as its name implies, manually, whereas the electric toothbrush operates on a battery. Also, the entire manual toothbrush needs to be replaced, opposed to an electric toothbrush. The head of the electric toothbrush is replaced, and the handle and shank remain for as long as the electric toothbrush continues to work. Another difference is that a manual toothbrush is only capable of motions the user can perform. Whereas the electric toothbrush can perform a combination of motions, such as rotation oscillation, counter oscillation, ultrasonic motion, pulsation, rotational, and side to side, all at the same time. Moreover, the number of brush strokes can vary anywhere from 3,800 to over 48,000 per minute (Wilkins, 2021).

These capabilities of an electric toothbrush can be considered pros because this results in a 10%-20% reduction in plaque and a 10% reduction in gingivitis, opposed to using a manual toothbrush (Wilkins, 2021). Also, another pro is electric toothbrush are far more useful for patients with disabilities who may have dexterity issues, parents or caregivers who must brush for a patient, those undergoing orthodontic treatment, or those with a history of failed attempts using a manual toothbrush for biofilm removal. Also, many models have a function where they shut off automatically when too much pressure is applied. This can be a benefit to aggressive brushers who tend to use too much pressure when brushing. Some cons of electric toothbrushes

are that they are far more expensive than manual toothbrushes, making them less accessible to the masses.

The pros of a manual toothbrush are that they are durable and inexpensive, efficient, designed for utility, and easily and efficiently manipulated (Wilkins, 2021). However, there are several cons to using a manual brush. One is that people are likely to apply excessive pressure while brushing, which can cause trauma to the gums and cause gingival recession. Another con is the number of brushing strokes during use. On average, 400-600 brush strokes are performed during a 2–3-minute brush session, which is much less than if one were to use an electric toothbrush. Also, people with limited dexterity and/ or arthritis may have trouble performing certain brushing methods, like the Modified Bass.

Tips that I would provide my patients with an electric toothbrush are to gently press the bristles along the gumline and allow the vibrations to clean and remove the biofilm. Also, I would tell them to use the timer that most electric toothbrushes come with to make sure that they are brushing long enough.

Part 3: Flossing Methods

Floss was invented by Dr. Levi Spear Parmly, a dentist in New Orleans, Louisiana, in the year 1815. He used a waxed silk thread. His motivation was providing his patients with the ability to thoroughly clean between their teeth. To this day, that remains the significance of flossing. Flossing removes plaque and other debris between the teeth that a toothbrush simply cannot reach. If a person does not floss, bacteria will begin to build up between the teeth, which can lead to gum disease.

There are two methods to flossing. One is the Spool Method. To begin the Spool method, break off an 18-inch piece of floss. Wind the floss around each middle finger and pinch the floss with the thumb and index finger. While keeping the floss taut, use 1-2 inches and guide the floss between the teeth in zig-zag motion. Never snap the floss between the teeth, as that can cause trauma to the gingiva. Form a soft C by contouring the floss around the tooth and slide the floss up and down against the tooth, under the gumline to successfully remove any debris. When moving to the next tooth, wind a new piece of floss from the two middle fingers. The rationale behind this method is that a new piece of floss will always be used, thereby eliminating the danger of reintroducing the bacteria removed between the prior tooth to the latter tooth.

The other method of flossing is known as the Loop method. To begin the Loop method, break off an 18-inch piece of floss and form it into a circle. Tie the circle together securely with a double knot, that way it will not become undone, and place all fingers within the loop, except for the thumbs. Use the index fingers to guide the floss between the teeth, contouring the floss against the tooth. Slide the floss up and down, below the gumline several times to effectively remove debris. The rationale behind this method is it is ideal for children who are learning to floss for the first time, people with poor dexterity due to arthritis or poor muscular coordination.

Part 4: Patient Care

A patient who is 13 years old, has orthodontic appliances and brushes once a day and never flossed before getting braces requires immediate education on the dangers of not properly maintaining their oral health. I would start off by explaining to the patient that having braces creates more places for debris to accumulate and increases the likelihood of plaque build-up, which can lead to dental caries and calculus. I would recommend Platypus, a brand of floss that is made specifically for patients with braces to make it easier for them to floss. As far as brushing once a day, I would explain to the patient that even the best toothpaste brands, such as Crest, only protect the teeth for about 12 hours after you brush. So, if one were to brush only once, their mouth would go about 12 hours without protection from bacteria. Therefore, the ADA recommends brushing at least twice daily, so one can have a full 24 hours of protection.

A patient who is 28 years old who has localized gingival recession on the buccal surfaces of all posterior teeth and indicates that they have been scrubbing their teeth using a medium bristle toothbrush their entire life, and only flosses when food gets stuck in-between needs to be educated on brushing and flossing. First, I would explain to the patient that a soft toothbrush is all that is needed to properly clean the teeth. Contrary to popular belief, the harder the bristles of the brush, the less effective it becomes when cleaning the teeth and gums. I would explain to the patient that a soft bristle brush is malleable enough to get underneath the gumline and remove plaque more effectively, because a medium bristle brush cannot bend the way soft do, and it is far too abrasive on the gingival tissue. More than likely, the patient may be using the horizontal brushing method, due to the recession of their gums. I would show them the modified bass method of brushing to help improve the health of their gingiva over time. For flossing, I would explain to the patient that they must floss once a day, regardless of whether food gets stuck in between. Even though food may not be visible, there is always some food debris between the teeth after every meal we eat, and it is imperative to remove that debris before it can progress into *Materia Alba*, which is a white cream-cheese like accumulation of food debris, dead cells and microorganisms, that aid in the formation of plaque and dental biofilm, which lead to calculus and dental caries.

Part 5: Reflection Writing Prompts:

I have learned a great deal from this assignment. For one, I did not know that hormonal changes impact gingival health. Puberty, pregnancy, and menopause are all cause for more stringent oral care. Also, the fact that 3 out of every 4 Americans will have Gingivitis at some point in their life is a shocking fact. I thought the number would be much less. I found this assignment beneficial for those reasons, and because the repetitive material and concepts of oral care that is being covered is solidifying my knowledge on this topic. I can recall and recite all toothbrushing and flossing methods now, as well as the rationale behind them. I also feel more comfortable being able to have conversation with patients in the future about plaque, calculus, and toothbrushing and flossing methods. For starters, I can explain to my father that a soft bristle brush is more effective and safer than a medium bristle toothbrush. My father insists on using a medium toothbrush with excessive pressure because he believes that the harder the bristles and the more pressure he uses, the cleaner his teeth will be. However, as this assignment has reiterated to me, that cannot be further from the truth. Use of excessive pressure along with

medium bristles will cause trauma to the gingiva, cause gingival recession, and loss of protective layer of our teeth called enamel. My father is 73 years old, so there is no telling the amount of damage done throughout the years!

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