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Toothbrushing and Flossing Writing Assignment #2

**Part 1: Understanding Gingivitis and Periodontitis**

Viewing the videos further assured my understanding of the gum disease that is gingivitis. The role that plaque accumulation has in causing this common disease that if treated early and consistently could be reversible. One thing that I had not taken notice of was how commonly it occurred. According to the crest, 75% of Americans experience gingivitis at some point in their life. If gingivitis is not treated, according to the American Dental Association just about 42% out of the 75% with gingivitis will progress to periodontitis. This made me think about different factors that could contribute to such a common occurring thing when we have so much in the market that is focused on the health of our oral cavity.

Looking at the risk factors that increase gingivitis. Just to list them: plaque accumulation and lack of plaque removal, use of tobacco products, certain medications, change in hormones, as well as anything that could compromise your immune response to fighting infections.

Plaque is what causes gingivitis and what initiates symptoms of inflammation to the site. Plaque containing streptococcus bacteria—anaerobic gram-positive—releases toxins that will result in a higher host response to the site. With host response comes the increase of blood flow which is to introduce leukocytes and plasma to the site. Edema is seen, which will clinically cause bleeding of gums when brushing or flossing. Patients tend to stray away from bleeding gums because they fear that they might be damaging their gums, but it’s the opposite effect when we see bleeding gums. We see a sign of disease, which with the right treatment could be reverse like it never was there.

The use of tobacco products will increase the chances of acquiring periodontitis, which is the worsening disease of gingivitis. It was documented in a National Health and Nutrition Survey that the correlation between smoking and periodontitis was coefficient. Smokers are linked to the possibility of stress, which essentially weakens the body and could interfere with the host response.

Medications like Phenytoin, Cyclosporine, Calcium channel blockers, and sodium valproate are associated with the appearance of gingivitis and gingival enlargement. Which essentially is the increase of fibroblasts in the site which can influence the presence of inflammation-causing it to worsen.

Hormone changes can be due to puberty or pregnancy. During such circumstances, the levels of estrogen and progesterone lead to an increase in blood supply like I had mentioned above, the increase of blood flow leads to inflammation.

A few tips that a patient could utilize to prevent gingivitis is to have a proper home oral health routine. The removal of plaque must be effective to reduce the chances of having symptoms like edema. If home oral care is not the patient’s focus due to many factors that could make focusing on an oral care routine, then visiting the dentist to get cleanings frequently could be a possibility to ensure cleanliness in the oral cavity, especially if the patient is pregnant. It is highly recommended for pregnant patients to have frequent visits to reduce their susceptibility to any disease that could harm the fetus in utero.

**Part 2: Toothbrushing Methods and Types**

The introduction of toothbrushing methods could be something that a patient would not be aware of. Speaking from experience when I visited my dentist at a young age, they found troubling areas in my oral cavity; there were signs that new toothbrushing methods should be applied to reach such hard-to-get areas than just using the “common” horizontal or scrub method that a lot of patients would have been taught since they were younger. Providing your patients with several toothbrushing methods will improve and ensure that they will brush all their teeth. This can be further done with a demonstration of the different types of methods that the patient can visually learn from and perform on themselves when brushing their teeth.

After brushing and utilizing a toothbrush the patient will need to follow proper care of their toothbrush. This being to fully rinse and let dry the toothbrush in an upright position, dry place. The way a toothbrush is stored will determine how cross-contaminated the brush will be. Drying is an important part of toothbrush care, placing a recently used brush in a closed container will allow for anaerobic microorganisms to thrive in this environment. Bacterial growth on toothbrushes whether it is by setting the brush in a close container or if set in proximity to other brushes should be avoided. It is a good reminder that this item will be used intraorally and that any kind of microorganisms could have the susceptibility to contaminate the toothbrush.

Circumstances for when toothbrushes should be changed depending on factors like the frequency and methods used. The ideal time frame for a change would be 2-3 months, but if the filaments are visually frayed or its resiliency is lost then it would be time for a switch to a better functioning toothbrush. Most importantly after an individual has had a cold or other types of respiratory infection that could linger in a toothbrush and increase bacterial growth.

Instead of utilizing a manual toothbrush, the use of an electric toothbrush is also a choice. There has always been a debate on which toothbrush to utilize for better oral hygiene. According to Colgate, around 80% of Americans still utilize a manual toothbrush. A manual toothbrush is effective enough for dental biofilm removal. With the price of a manual toothbrush being lower than a powered brush many other benefits would make a consumer still utilize a manual toothbrush. Another benefit is the design of manual toothbrushes, there seems to be a large variety of designs to fit an individual’s preferred characteristics. To be more specific, the design of handles and the head of the brush. Handles can come in different types of curves, angles, and a thumb rest to increase grip when adapting to harder-to-reach areas in the mouth. A thicker handle, the higher diameter a handle has will provide an advantage for patients with dexterity limitation, such as children, older patients, and patients with a disability. With the different types of handles comes different types of brush head designs. From a flat brush head to an angled brush head there is variety in which would suit the patient for the most effective cleaning. Furthermore, the head design of a manual toothbrush can have a choice of sizes. For a crowded dentition, a standard side toothbrush head would not be as effective compared to a smaller brush head that would be easier to maneuver in harder-to-reach areas. For younger kids, the size and material of the toothbrush would be altered. The head of the brush would be a smaller fit to facilitate a primary dentition and the material is altered for the children’s safety, A hard plastic could be a risk for gingival trauma which is why a softer material is utilized. Lastly, this feature is focused more on the younger kids and that would be the aspects of color and designed toothbrushes. Younger kids are very intrigued with their favorite characters, and that is possible with manual toothbrushes. Their favorite colors and characters could be the design of the toothbrush and this will ultimately result in the younger kids feeling more encouraged to brushing their teeth since they are seeing something they enjoy on the brush.

Now, looking at electric toothbrushes and their features. The use of power instead of manual force makes all the difference when brushing. From the speed of the brush to the motions produced by the brush while just simply holding the toothbrush. According to Crest, there has been evidence that power toothbrushes have up to fifty-five thousand bristle movements per minute when compared to a manual toothbrush which only had about four hundred to six hundred bristle movements per minute which essentially relies on the user and their manual force. The round brush head on the electric toothbrushes with a rotating oscillating action power is known to be more effective to get into interproximal areas rather than when brushing in a side-to-side motion. Adding to the pro column would be how the brush could be useful for every patient. From just someone that just seems to want a better clean and biofilm removal to those with orthodontic appliances and patients with disabilities or limited dexterity. The use of a brush with a larger handle, heavier in weight, and automatic motions will help those that cannot brush their teeth effectively with a manual toothbrush.

Cons to the electric toothbrush would be the cost. When we compare the expenses needed for a manual brush and an electric one it has a wide gap in pricing. Toothbrush heads for the electric toothbrush could be about the same price as a manual toothbrush. With powered items comes the need for constant charging, always will need to reassure you have enough battery in your brush, or else it could go on when you are proceeding with the two minutes of brushing, which would make a manual more convenient. There are pros and cons for both versions of a toothbrush but, it’s all by preference and effectiveness to the individual.

**Part 3: Flossing Methods**

The invention of floss was an innovation that benefitted patients. The inventor, Dr. Levi Spear Parmly from New Orleans was one of the first dentists in 1815 to encourage his patients to utilize thin silk threads to clean the missed and hard-to-reach interproximal areas on the teeth like the col. The invention of floss that D. Parmly had begun later was used in mass production in 1882 by a company called the Codman and Shurtleft Company in Massachusetts when they marketed unwaxed silk dental floss. This further followed with more companies to follow and produce floss with different innovations along the way. One of the innovations was the switch to nylon dental floss from silk. Nylon’s composition made the floss have a more consistent texture and made it less resistant to shredding. It was overall a better material to use for the task of flossing interproximal.

Flossing makes it possible for biofilm removal that a simple toothbrush cannot reach. I always saw toothbrushing and flossing as levels. Flossing would be just half of the routine to cleaning your teeth, and toothbrushing would complete the so-called cycle of the oral-care program. Flossing is used for deeper cleaning in areas like the col. Col area is a non-keratinized part of the free gingiva which makes it more susceptible to infections if plaque builds up and is undisturbed through oral home care.

Just like tooth brushing, flossing has its techniques to ensure correct and efficient dislodging of food and biofilm. The use of the spool method or the loop method can be both effective ways, the patient’s preference, and ability to perfume the task will determine the method used. To go through the steps of flossing, firstly the patient would either use the stool or loop method which I will go into detail later. Once the method of how the patient will hold the floss is decided the overall strokes for flossing is a C-shape. When pressure is applied for the floss to cross the contact areas of the teeth the use of index or thumb will be needed depending on which arch is being treated. Importance of a fulcrum when pressure is applied to insert the floss this is so that we could prevent injuring the gingival margin and resulting in floss cleft. Once the floss is inserted the floss will be either used on the mesial or distal aspect at a time. The floss should be on the tooth’s surface when making sawing or c-shape strokes reaching beneath the gingiva.

The methods mentioned before, the spool method and the loop method. The spool method is to have a floss wrapped on your fingers of both hands keeping a 1–2-inch length of floss in between for where the teeth would fit for flossing. From personal experience, I would say that this method if a lot of pressure is placed on the floss wrapped around your fingers, then it could feel uncomfortable and leave impression marks. While the loop method is focused on individuals that have trouble with manual dexterity or are small children. For this method, a long piece of floss is tied into a knot so that your fingers can interlock within the loop to be ready to floss. The advantage of this method is the accommodatable of the products for those with lack dexterity and small children. It also lowest the waste of floss since a certain amount of floss is being used at a time as it is tied in a loop.

Tips that I could provide my patients with an electric toothbrush would be to always make sure it is charged and ready for use. For after use care, the manual toothbrush protocols follow. Keeping the toothbrush head in an open and dry area in an upright position to dry and away from any other toothbrushes to prevent cross-contamination.

**Part 4: Patient Care**

How would you approach a 13-year-old teenager who has orthodontic appliances and tells you he brushes once a day and never flossed before getting braces?

For a teenager that just had gotten orthodontic appliances giving advice and informing them about changes that need to be done for a clean mouth is important. Informing them about how braces are an infection trapping appliance and cleaning restricted appliance needs further cleaning than what was being done before. Having damaged teeth at such a young age would not be something the patient will like, after braces every patient hopes for a healthy and pretty smile, not having good oral home care will strip off the chances of having that. Then again, it’s important to listen to your patient and hear the reason why they were not brushing twice a day or even flossing. Many factors can contribute to these actions. Being unmotivated is one of the top ones that I think about. Brushing your teeth and flossing is not something a teen would be excited to do, finding ways to motivate the healthy practice of oral care would benefit them greatly. The recommendation of different flosses or even an electric toothbrush, showing them how to use them and why they are important in preventing gingivitis and especially periodontitis could be a great learning moment. Another recommendation would be to visit the dentist for scheduled cleanings more frequently than if you did not have the braces. Instead of every 6 months, visits could be every 3 months to reduce the chances of something unhealthy occurring in the oral cavity.

How would you approach a 28-year-old patient who has localized gingival recession and the buccal surfaces of all posterior teeth, and indicates that they have been scrubbing their teeth using a medium TB bristle their entire life, and only flosses when food gets stuck in-between?

We can start by reviewing the gingival recession on the buccal aspect of all posterior teeth. It seems like the method of toothbrushing seems to be very abrasive and the use of a medium toothbrush bristle adds to the abrasion. For this aspect, a demonstration of different methods that are less abrasive and more beneficial to the gingiva and interproximal areas as well. The new methods of toothbrushing should be beneficial in all parts of the mouth, from the gingival margin line to the occlusal surfaces. The patient has said that they floss only when food gets stuck in-between teeth, this is a good start and a good mindset. Knowing that if food has gotten stuck interproximal that it should be removed, but flossing should be done at least once a day. There can be particles stuck in-between the teeth that you can see straight on. Flossing makes it possible to remove any food debris and plaque that is hidden in areas like the col. Motivation and constructive teaching after hearing the patient’s reasonings are always a good way to approach a concern.

**Part 5: Reflection writing**

This assignment has taught me how complex the simple act of flossing and brushing your teeth is. From the different kinds of methods to the different types of toothbrushes and flosses, my knowledge has broadened. I found this assignment beneficial, like I had mentioned before I was never taught different methods of brushing. Since I was little, I would just go with brushing with different angles from the filaments to the tooth without really knowing there were specific names to these techniques and different purposes. With the correct techniques and consistency, the higher the chance of preventing plaque build-up was possible.

With learning about flossing and toothbrushing I had started to pick up different ways my siblings would do oral home care. Just by looking at my older brother’s toothbrush, I can see signs of excessive pressure used when brushing. He had orthodontic appliances at the time which could have contributed to the thinking of brushing harder equals cleaner teeth. The filaments of the manual toothbrush would look branched in just weeks of replacing the brush. This was later fixed when he switched to an electric toothbrush, I saw less branched toothbrush heads which gave me the good idea that a change in pressure was done. Another example would be my older sister, she would experience bleeding when brushing. That on its own was a sign of something that had to be taken care of. The frequency of when she would floss was inconsistent, meaning that a lot of microorganisms led to an inflammation on the site causing bleeding when brushing. There seems to be a way of thinking that blood coming from the gingival margin means that they should avoid the area, but that is the complete opposite when we look deeper into how our body responds to infections. My sister later fixed the inconsistency of flossing and made it a habit to floss with the C-shape that the dentist had recommended.

Promoting good habits to patients is what we set off to be in the future. Feeling comfortable in sharing your knowledge and properly demonstrating correct methods for something simple like brushing your teeth and flossing could make a difference from a patient having gingivitis to later be reversed and having a healthy mouth to someone going from having gingivitis to being a periodontics case. Feeling comfortable to communicate with your patients about troubling areas in the mouth and how they can be improved is the preventive care that dental hygienists set out to do for the wellness of our patient’s oral health.

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