**Diagnosis sheet #10**

**Refer to slides #7 Mays Abu Afifeh&Zaid jebreen.**

* This lecture is going to be about oral hygiene instructions.
* the majority of dental and periodontal problems are because of dental plaque.
* Caries depend on:

1. Sugar and carbohydrates
2. Bacteria
3. Tooth
4. Time

\*Secondary factors: social status, economics ,income, behavior ..etc

* **Periodontal disease:**

Slide6: gingivitis with calculus

* Periodontal disease is multifactorial, more complicated than caries because it needs a pathogenic microorganism and the host's immune systems is impaired whether by a disease like diabetes or by stress, also social habits ,like smoking ,have direct effect on periodontal disease so the patient is more severely affected and the treatment is less effective.
* **Plaque control:**
* basically it’s removal of plaque using some agents like brushing teeth using fluoridated toothpaste for high caries risk patients to reduce caries occurrence and to reduce amount of bacteria on gingiva to prevent periodontal diseases ,also it prevent the formation of calculus which is a mineralized plaque. Plus it’s important aesthetically!
* **Plaque control methods:**
* Can be either mechanical or chemical(mouth washes); mainly we'll talk about mechanical methods.
* **Tooth brushes:**
* Toothbrushes can be either manual or powered, with different sizes and designs. The material that's used nowadays is nylon not natural product because they stain and cause many unhealthy problems.
* **Bristles** are grouped in tufts usually in 3-4 rows; they can be long or short, hard or soft. Note that hardness depends on length and diameter, the longer the bristles the softer the brush, and the larger the diameter the harder the brush. Soft and medium brushes are preferable.
* Notes:-

1. Hard brushes shouldn’t be used for those with less amount of enamel(high risk of class 5 caries)since it could lead to abrasion. Also those with thin gingiva are advised to use soft brushes.
2. special needs patients don’t control the used force so soft/ ultrasoft brushes are recommended.
3. from a clinical point of view the type of brush doesn’t really affect your oral health but it aids in improving it for those who can’t manage the right technique.
4. Usually the needed force for brushing equals that for holding a pen (plaque is soft,no need for large forces)
5. According to ADA Toothbrushes need to be replaced every 3-4 months

Slide#17:**FLARING** of the bristles is an indication to change your toothbrush.

1. If patients perceive a benefit from a particular brush design, they should use it even if you think that there're other better types.

* **Oral Hygiene methods:**
* **Vertically** you may not reach the gingiva
* **Vibratory** method is the most preferable method to be used, it consists of 3 techniques(modifications) :Stillman, Charters, and Bass techniques.
* **Bass modified technique** targets the gingival margins and sulcus, by placing the head of a soft brush parallel with the occlusal plane,45° towards gingival margin ,then exert gentle vibratory pressure, using short, back-and-forth motions from one side to the other -molars then premolars, canines and incisors of one arch buccully and lingually then the other arch, and finally occlusal surfaces -10 seconds on each segment of teeth,30 seconds on each quadrant,2 minutes for all teeth.
* Oral hygiene depends mainly on the used force, hardness of the brush, content if the toothpaste and the technique whether you used a traumatizing one ot the correct one!
* **Tooth Brushing Trauma:**
* It's very common and appears as ulcers,recession or abrasion lesions depending on the brushing technique, amount of force and the abrasiveness of the dentifrices. For example most commonly, right handed patient has abrasion lesions on left quadrant.
* **Manual or powered tooth brushes?**
* They both do the job but with slight advantages to the powered tooth brushes:

1. Oscillating (back and forth) and rotating motions.
2. Low-frequency acoustic energy which breaks the plaque by generating dynamic fluid movement and provides cleaning away from the bristle tips also vibrations interfere with bacterial adherence to oral surfaces.
3. Less technique sensitive.

* **Recommendations:**
* Powered toothbrushes with oscillating and rotating motions remove plaque and reduce gingival bleeding slightly better than manual toothbrushes.
* Patients need to be instructed to the proper use of powered devices.
* Patients who are poor brushers, children, caregivers, old patient, mentally retarded patient or rheumatoid arthritis patient may particularly benefit from using powered brushes.
* Novelty effect is a psychological effect when a new high-tech tool makes brushing more motivating and acceptable to the patient.
* Brushing duration:1 minute per jaw,2 in total.
* **Dentifrices:**
* A term used to describe a powder, paste or gel used with toothpaste to aid in removal of plaque and stains.
* Purpose:
  1. Cleaning
  2. Polishing
  3. Stain removing
  4. Reduce tooth decay
* **Tooth Paste Components:**
* Mostly consists of water (40%) and abrasive which is a silica component that aids in removing plaque, but we must be careful when the toothpaste is too abrasive especially if the patient's teeth are hypomineralized or has amelogenesis imperfecta.
* Tooth powders contain about 95% abrasives and are five times more abrasive than pastes. It's given to smokers
* Toothpastes also contain humectants, detergent that some people have allergy to it and cause plasma cell gingivitis, Thickeners,Sweeteners,Flavors and Active agents.
* Although active agents are only 0.2% but they have important advantages, some examples of these agents: Anticaries like fluoride,Desensitizing pastes,Antiplaque,Anti-calculus that is given to smokers because it contains pyrophosphate,Anti-gingivitis and Whitening pastes.
* **Chemical Plaque Control:**
* Works as an adjunctive aid in removing the mechanical debris, has different types and side effects and very helpful if the patient had a surgery and needs to clean his gingiva.
* **Interdental Cleaning:**
  1. Dental Flossing (floss, floss holders, powered floss)
  2. Interdental brushes
  3. Wooden or plastic tips
  4. Rubber tip stimulators
* Brushing teeth is responsible to clean only 60% of the tooth surface, to clean the other 40% we should use interdental cleaning aids ,so by using only toothbrush we can't clean the tooth properly .They are important to prevent interproximal caries and periodontal pockets.
* **Dental floss:**
* Waxed or unwaxed. The waxed types used if there's tight contact so it facilitates floss insertion.
* manual or powered
* No significant differences in the ability of the various types of floss to remove dental plaque; they all work equally well.Type of floss should be based on ease of use and personal preference.
* It was reported that floss was effective at removal of subgingival interproximal plaque up to a depth of 2 mm.
* How to floss?
  1. Take a thread of 3-4 cm
  2. Dental floss should be held securely in the fingers between index and thumb or tied in a loop
  3. keep rolling it until you have a working area of 1 cm
  4. Pass it gently through each contact area with a firm back-and-forth motion. Do not snap the floss past the contact area because this may injure the interdental gingiva
  5. The floss is slipped between the contact area of the teeth, is wrapped around the proximal surface, and removes plaque by using several up-and-down strokes.
* **Superfloss:** It has thick part in the middle and used to floss under braces, and a thin part to guide you
* **Recommendations:**

1. The benefits of interproximal cleaning using dental floss are undisputed.
2. Flossing tools work as well as flossing with the traditional method.
3. The flossing habit is difficult to establish.

* **Interdental Brushes:**
* They're very useful to clean root concavities, mesial grooves, under braces and around implants. Inserted through interproximal spaces and moved back and forth between the teeth with short strokes.
* They're color coded with different sized .The diameter of brush should be slightly larger than the gingival embrasures to be cleaned.
* **Toothpicks:**
* They can be useful if used properly but they may injure the gingiva if you have tight spaces.
* Wooden picks are safer than regular toothpicks, they're triangular in cross section with their base towards the gingiva and head facing contact area.
* **Irrigation:**
* Work by directing a pulsating stream of water through a nozzle to the tooth surface, it has two types: Subgingival Irrigation and supragingival irrigation.
* Supragingival irrigation isn't that important, but subgingival is useful when periodontal patients has deep pockets and refuses surgeries.
* **How to brush?**

1. Add Pea-size toothpaste
2. Patient is instructed to start with molar region of one arch around the opposite side than continue back around the lingual or facial surfaces of the same arch.
3. Frequency: Brushing twice a day, even though once before sleeping is enough, Interdental cleaning once a day.
4. Patient Education & motivation:

* Disclosing agents: To improve the efficiency of plaque control procedures staining bacterial deposits on the surfaces of teeth, tongue, and gingiva.
* Plaque control instruction in the office and dispensed for home use to aid periodontal patients in evaluating the effectiveness of their oral hygiene routines.
* Educational and motivational tools
* Note: if the patient prefer a certain way of brushing don’t change it completely, just add small modifications.
* **Smoking:**
* It causes many diseases like lung and oral cancers, also cause cardiac and respiratory problems, staining, decrease saliva ,increase caries and reduces wound healing
* Smoking Cessation: **5 A's** model: **A**sk, **A**dvise, **A**ssess, **A**ssist, **A**rrange.

Ask him if he's smoking then advise him to quiet ,asses if he's ready to quit ,if yes then assist a quit plan and give a dead-line for quitting, finally arrange schedule in-person or phone follow-up.

* **Nicotine Replacement Therapy:**

1. Use caution in patients within 2 weeks post-MI, arrhythmias, or serious or worsening angina pectoris.
2. Studies show nicotine replacement therapy is safe and effective in post-MI patients.
3. Combinations of patch, gum, and nasal spray are generally safe and effective.
4. Combination of bupropion and nicotine replacement is more effective than either alone
5. Generally, pharmacotherapy is not indicated in individuals who use less than 10 cigarettes in one day.
6. The exceptions to this recommendation include, but are not limited to:
7. Patients with medical contraindications, such as an MI or stroke within the last 2 weeks
8. Women who are pregnant or breastfeeding.

* **Diet Analysis & Counseling:**
* We all know what food is good and what's not, sweets or sticky food is very harmful for our teeth and increase the occurrence of caries especially if it was taken between meals because sugar will always be available in the oral cavity.
* **Diet analysis must be given to patients with :**

1. High caries risk
2. Erosion
3. Sugared Medications

* **Diet sheet** is a must after diet analysis. It's a sheet that is given to the patient and has table of days and time, you have to choose 3 days within a week (two working days and one weekend) .ask the patient to write down everything he eats and drinks and the time during the day when consumed. Then you try to modify his behavior.
* **Diet tips:**

1. Don’t snack in between meals.
2. If you have to snack the best foods are savory such as: raw carrots, cucumber, celery and peppers, chunk of cheese, plain cheese biscuit such as oat cakes, bread sticks, rice cakes, plain crisps, crumpets, pitta bread.
3. Drink plain tap water or tea/coffee without sugar in between meals.
4. Don’t eat sugary foods between meals within an hour of bedtime.
5. Chewing sugar free gum after eating may help to increase the salivary flow which helps the teeth to repair themselves.
6. Don't brush your teeth immediately after having acidic drinks.

**Good luck ☺**