‘PARTNERS IN EDUCATION’ NEWSLETTER

Brought to you by:

Mehta Orthodontics

Welcome to the first edition of our ‘Partners in Education’ update newsletter. Our aim is to provide you, our valued referring dentists, with updates on aspects of dentistry that may help in the interdisciplinary care of our patients.

This first article is a copy from the American Association of Orthodontists Newsletter on the protocol for periodontal screening for adult patients who may be seeking orthodontic treatment. The task force was set up due to litigation cases in the USA from adult patients who had orthodontic treatment and where there was active periodontal inflammation.

As more adult patients seek orthodontic treatment, I think it is important that we also develop a protocol for our patients. Hopefully, this article will help in this regard and ensure an optimal standard of oral health for those patients who have periodontal inflammation and seek orthodontic care.

Please feel free to call me if you have any questions.

Kind regards

ATUL MEHTA

Email: atul@mehtaorthodontics.com.au
Phone: 8883 4444

Periodontal Screening for Orthodontic Patients - Joint Task Force Recommendations

During the past year, the AAO launched its new consumer awareness campaign, targeted for adults. Currently, the percentage of adult patients in the average orthodontic practice is over 20 percent.

Although most adults who seek orthodontic treatment have healthy gingiva and periodontal support, some of the new influx of adult patients will have varying degrees of periodontal problems that could become worse if not detected prior to placing appliances on the patient's teeth. Do all adults need a referral to a periodontist? Not really. Only those who have pre-existing periodontal disease and those at risk of developing periodontal problems need to be referred. So, how do you identify the patient who is at risk of developing periodontal problems?

That question was charged to an American Association of Orthodontists-American Academy of Periodontology (AAO-AAP) Task Force that was jointly commissioned by the AAO and AAP Boards of Trustees in 2009. The task force assignment was to create recommendations for practitioners regarding the appropriate periodontal screening methods for adult orthodontic patients.

The AAO-AAP Task Force consisted of four members, two from orthodontics (Drs. Lee Graber and Vince Kokich) and two from periodontics (Drs. Sam Low and Paul Rosen). Their mission was to provide orthodontists with a reliable and systematic method of identifying adult orthodontic patients who are at "risk" of developing periodontal disease.

Over three years, these individuals, with the review and support of AAO and AAP councils and committees, communicated on numerous occasions to arrive at the recommendations that appear in this article. While many practices have developed their own periodontal screening protocols, the AAO-AAP Task Force looked to provide an additional evidence-based, practical option for the dental profession.

Adequate Health and Dental History

All orthodontists routinely have each patient complete a medical history and make note of the patient's previous dental treatment. However, there are four items that help determine the potential risk of developing periodontal disease during orthodontic treatment:

1. ***Frequency of prior dental visits***. Is the adult patient seen regularly (every six months by his or her dentist)? If so, underlying periodontal problems have probably been managed effectively prior to orthodontics.

However, if the patient states that he/she only visits their general dentist every two to three years, then this could be a potential risk factor for developing periodontal problems during orthodontics.

2. ***Is the patient a diabetic***? Why is this a concern? Researchers have shown that patients with poorly controlled diabetes are more likely to develop periodontal disease than those with well-controlled diabetes.
3. ***Does the patient smoke tobacco products****?* Again, why would this be a concern? Studies have shown that tobacco use may be one of the most significant risk factors in the development and progression of periodontal disease. In addition, after periodontal treatment, the chemicals in tobacco can slow down the healing process and make the treatment results less predictable.
4. ***Has the patient had previous periodontal therapy****?* We know that for periodontal disease to progress, the patient's oral bacterial flora must contain one or more of the known periodontal pathogens, and the patient must be susceptible to these bacteria. So, if the patient has had previous periodontal therapy for bone and/or tissue loss, it indicates that the patient is susceptible to recurrence of the disease if the bacteria are not removed adequately.

Appropriate Intraoral Radiographs

Most orthodontists routinely take panoramic radiographs of their patients prior to beginning orthodontic treatment. Panoramic radiographs are wonderful screening tools for certain aspects of dental anatomy. However, panoramic radiographs are not sufficient to determine the interproximal distance between the cementoenamel junction and the alveolar crest. This is an important measurement when assessing periodontal health and risk of disease. Normally in adults this distance should be about 2 millimeters. If this distance were between 2 and 4 millimeters, the risk for periodontal breakdown during orthodontics is increased. If the distance were greater than 4 millimeters, the periodontal risk increases even more. It is simply impossible to measure these interproximal distances accurately and in a predictable manner on a panoramic radiograph.

The gold standard for appropriate intraoral radiography for adult orthodontic patients is:

1. Vertical bitewing radiographs of the posterior teeth
2. Periapical radiographs of the maxillary and mandibular anterior teeth

Could CBCT machines be used to create the appropriate bitewing and periapical images? Yes, if the resolution of the X-ray machine is adequate. This factor depends upon the voxel size, the field of view of the specific machine, and the

slice thickness. Ongoing research on CBCT imaging likely will provide more information as to the propriety of using CBCT for screening protocols.

Complete Periodontal Charting

Most orthodontists do not perform a complete periodontal charting of their adult orthodontic patients. While trained in such charting during dental school, most orthodontists are no longer highly skilled with the use of a periodontal probe to routinely measure sulcus depths, determine bleeding sites, and identify furcation defects. However, the knowledge of these abnormalities in the patient's periodontal status is of utmost importance in determining the risk of the patient developing future periodontal disease.

Who should perform the periodontal charting? The Task Force agreed that the patient's general dentist would be the most likely person on the dental team to create and maintain an accurate periodontal charting of the patient. Periodontal charting is a part of routine dental check-ups for most adult patients. In addition, in many of the lawsuits that have arisen because of periodontal disease that develops during orthodontic treatment, both the general dentist and orthodontist are often found mutually liable for damages.

When an adult patient schedules an examination appointment with an orthodontist, the receptionist should contact the general dentist and request the most recent periodontal charting and any recent bitewing and periapical radiographs of the patient. Ideally, these should be present at the examination appointment. Then, when the orthodontist compares the charting to the radiographs, areas of concern, such as pocket depths greater than 5 millimeters, bleeding upon probing in several quadrants, mobile teeth, interproximal bone loss, furcation defects, lack of attached gingiva or gingival recession will be noted. The orthodontist must be aware of these periodontal problems prior to beginning orthodontics.

Method of Assessing Risk

The above-mentioned three items (health/dental history, radiographs, and periodontal charting) provide background information for the orthodontist. However, extrapolating the appropriate information and determining the future risk of developing periodontal disease is difficult. But assessing risk is the key to preventing future periodontal breakdown. In other words, how does the orthodontist delineate those patients requiring periodontal surgery from those who only require root planning and scaling? Someone or some system must be used to arrive at these decisions. The Task Force identified two methods for assessing the level of current disease and the risk for future disease.

One method is for the orthodontist to develop a working relationship with a periodontist in his or her local area, and to have a system in place that directs the orthodontist when to refer the patient to the periodontist for treatment. However, some orthodontists are not fortunate enough to have developed this kind of working relationship and/or may not have a periodontist practicing nearby.

The other method of establishing the level of disease and future risk is to use a computer-based system. The Task Force identified a company, PreViser, which has an easy-to-use system of inputting information gathered from the health/dental history, radiographs, and periodontal charting, and arriving at not only a current disease score, but also providing the orthodontist with a risk score for future periodontal disease.

Based upon the levels of disease and risk, the management of the patient's periodontal treatment can be easily ascertained. Although the Task Force does not endorse any particular protocol or product, of the ones currently available, the PreViser system (www.PreViser.com) proved affordable, informative, and reliable for the orthodontist and general dentist.

Summary

The joint AAO/AAP Task Force has achieved its mission. It has developed a set of criteria that are valuable and useful to the orthodontist who treats adult patients. Careful adherence to the recommendations contained in this article will help the orthodontist and the general dentist properly screen their patients for periodontal disease and risk. In addition, this important step will help to avoid lawsuits due to periodontal problems that arise during orthodontics and most importantly improve the oral health of adult patients during orthodontic treatment.

Mehta Orthodontics
Suite 313 QCentral Building
10 Norbrik Drive
BELLA VISTA NSW 2153
P 8883 4444 F 8883 4447