

Starting with the nme of Allah

Name: Sameen Jan

I'd :13714

viva Assingmt: Orthodontics

Submitted to

Mam salma

Question) Para function habits .

Ans)

A para-functional habit or parafunctional habit is the habitual exercise of a body part in a way that is other than the most common use of that body part. The term is most commonly used by dentists, orthodontists, or maxillofacial specialists to refer to para-functional uses of the mouth, tongue and jaw. Oral para-functional habits may include bruxism (tooth-clenching and/or grinding), tongue tension ("tongue thrusting"), fingernail biting, pencil or pen chewing, mouth breathing, and any other habitual use of the mouth unrelated to eating, drinking, or speaking.

Crenated tongue is a descriptive term for when scalloping develops on the lateral margins of the tongue as a result of habitual forcing of the tongue against the teeth.

Contrary to common belief, functional activities such as chewing are not the main cause of tooth wear. Parafunctional habits are the most destructive forces for several reasons. Whereas teeth rarely come into contact during normal chewing, grinding of teeth may occur 1-4 hours in a 24-hour period, most often during sleep. The amount of pressure placed on teeth during functional habits is 140–550 kilopascals (20–80 psi), but the pressure can range from 2–20.7 megapascals (290–3,000 psi) during parafunctional habits. The direction of forces during functional habits is placed vertically along the long axis of teeth, which is the least harmful because of the anatomical structure of the attachment of teeth to the bone. On the other hand, parafunctional habits direct their forces horizontally. Normally, the temporomandibular joint (TMJ) acts as a class III lever, which helps to restrict the amount of force generated. Class I or class II levers may be created during bruxism, which generates more force from the same amount of muscle activity and subsequently delivers more force to the teeth.



Extreme force upon the teeth can occur during some situations as a protective reflex. When a person senses the risk of an imminent car crash, for example, the teeth arches are normally firmly occluded. This over-clenching is still considered parafunctional, although it serves a functional purpose; the maxilo-mandibular complex is much less vulnerable to harm and dislocation because it is bonded by muscles and interposed teeth. When this kind of reflex acts, it is very important to have a good memory of one's "best bite" position in order to avoid fractures.[citation needed] It is one hypothesis for why military jet pilots crack more teeth than auxiliary crew

types of Para function habits

Broxism:

Bruxism is excessive teeth grinding or jaw clenching. It is an oral parafunctional activity;[1] i.e., it is unrelated to normal function such as eating or talking. Bruxism is a common behavior; reports of prevalence range from 8% to 31% in the general population.[2] Several symptoms are commonly associated with bruxism, including hypersensitive teeth, aching jaw muscles, headaches, tooth wear, and damage to dental restorations (e.g. crowns and fillings).Symptoms may be minimal, without patient awareness of the condition



There are two main types of bruxism: one occurs during sleep (nocturnal bruxism) and one during wakefulness (awake bruxism). Dental damage may be similar in both types, but the symptoms of sleep bruxism tend to be worse on waking and improve during the course of the day, and the symptoms of awake bruxism may not be present at all on waking, and then worsen over the day. The causes of bruxism are not completely understood, but probably involve multiple factors.[4][5] Awake bruxism is more common in women, whereas men and women are

affected in equal proportions by sleep bruxism.[5] Awake bruxism is thought to have different causes from sleep bruxism. Several treatments are in use, although there is little evidence of robust efficacy for any particular treatment.

Signs and symptoms

Most people who brux are unaware of the problem, either because there are no symptoms, or because the symptoms are not understood to be associated with a clenching and grinding problem. The symptoms of sleep bruxism are usually most intense immediately after waking, and then slowly abate, and the symptoms of a grinding habit which occurs mainly while awake tend to worsen through the day, and may not be present on waking.

Excessive tooth wear, particularly attrition, which flattens the occlusal (biting) surface, but also possibly other types of tooth wear such as abfraction, where notches form around the neck of the teeth at the gumline.

Tooth fractures, and repeated failure of dental restorations (fillings, crowns, etc.).

Hypersensitive teeth, (e.g. dental pain when drinking a cold liquid) caused by wearing away of the thickness of insulating layers of dentin and enamel around the dental pulp.

Attrition:



Dental attrition is a type of tooth wear caused by tooth-to-tooth contact,[1] resulting in loss of tooth tissue, usually starting at the incisal or occlusal surfaces. Tooth wear is a physiological process and is commonly seen as a normal part of aging. Advanced and excessive wear and tooth surface loss can be defined as pathological in nature, requiring intervention by a dental practitioner. The pathological wear of the tooth surface can be caused by bruxism, which is clenching and grinding of the teeth. If the attrition is severe, the enamel can be completely worn

away leaving underlying dentin exposed, resulting in an increased risk of dental caries and dentin hypersensitivity. It is best to identify pathological attrition at an early stage to prevent unnecessary loss of tooth structure as enamel does not regenerate

sign Symptoms:



Attrition occurs as a result of opposing tooth surfaces contacting. The contact can affect cuspal, incisal and proximal surface areas.

Indications of attrition can include:

Loss of tooth anatomy: This results in loss of tooth characteristics including rounding or sharpening of incisal edges, loss of cusps and fracturing of teeth. Enamel of molar teeth may appear thin and flat. When in occlusion the teeth may appear the same height which is particularly apparent for anterior teeth.

Sensitivity or pain: Attrition may be entirely asymptomatic, or there may be dentin hypersensitivity secondary to loss of the enamel layer, or tenderness of the periodontal ligament caused by occlusal trauma.

Tooth discolouration: A yellow appearance of the tooth surface may be due to the enamel being worn away, exposing the darker yellowish dentin layer underneath.

Altered occlusion due to decreasing vertical height, or occlusal vertical dimension.

Compromised periodontal support can result in tooth mobility and drifting of teeth

Loss in posterior occlusal stability

Mechanical failure of restorations

Causes:

Dental attrition is tooth wear caused by tooth to tooth contact. Well-defined wear facets appear on tooth cusps or ridges. This can be caused by several factors, including parafunctional habits such as bruxism or clenching, developmental defects, hard or rough-textured diet, and absence of posterior teeth support. If the natural teeth oppose or occlude with porcelain restorations, then accelerated attrition of the natural teeth may result. Similarly, when an edge to edge class III incisal relationship is present dental attrition can occur.[] The underlying cause of attrition may be related to the temporomandibular joint as a disruption or dysfunction of the joint can result in compromised function and complications such as bruxism and clenching of the jaw may arise.

Prevention

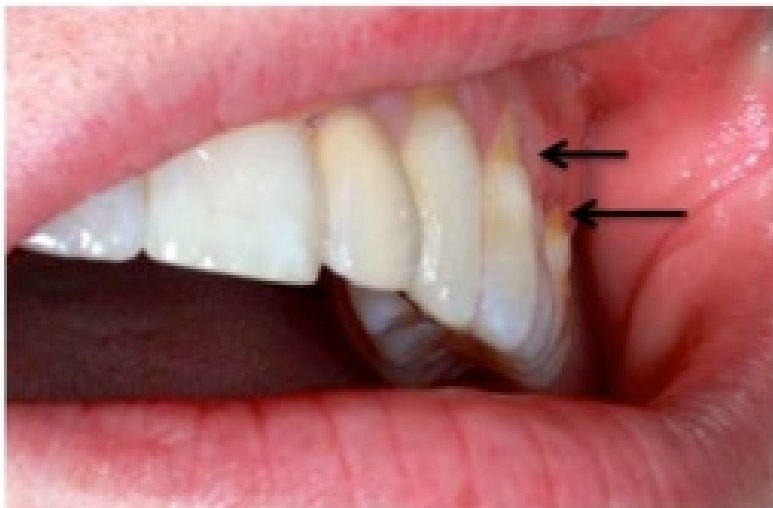
When a diagnosis of bruxism has been confirmed, it is recommended that the patient buy a full-coverage acrylic occlusal splint, such as a Michigan Splint or Tanner appliance, to prevent further bruxism. Patients must be monitored closely, with clinical photographs 6–12 monthly to evaluate if the tooth surface loss is being prevented.

Treatment

Cosmetic or functional intervention may be required if tooth surface loss is pathological or if there has been advanced loss of tooth structure.[18] The first stage of treatment involves managing any associated conditions, such as fractured teeth or sharp cusps or incisal edges. These can be resolved

by restoring and polishing sharp cusps. Then, desensitizing agents such as topical fluoride varnishes can be applied, and at home desensitising toothpastes recommended. Many restorative options have been proposed, such as direct composite restorations, bonded cast metal restorations, removable partial dentures, orthodontic treatment, crown lengthening procedures and protective splints.] The decision to restore the dentition depends on the wants and needs of the patient, the severity of tooth surface loss and whether tooth surface loss is active. The use of adhesive materials to replace lost tooth structure can be performed as a conservative and cost-effective approach before a more permanent solution of crowns or veneers is considered.

Abfraction:



Abfraction is a theoretical concept explaining a loss of tooth structure not caused by tooth decay (non-carious cervical lesions). It is suggested that

these lesions are caused by forces placed on the teeth during biting, eating, chewing and grinding; the enamel, especially at the cemento-enamel junction (CEJ), undergoes large amounts of stress, causing micro fractures and tooth tissue loss. Abfraction appears to be a modern condition, with examples of non-carious cervical lesions in the archaeological record typically caused by other factors



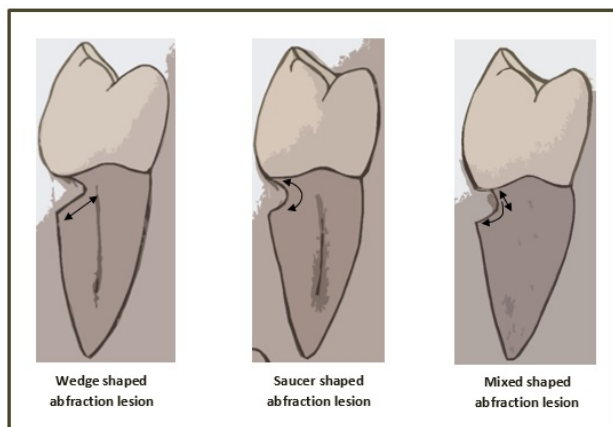
Abfraction is a form of non-carious tooth tissue loss that occurs along the gingival margin. In other words, abfraction is a mechanical loss of tooth structure that is not caused by tooth decay, located along the gum line. There is theoretical evidence to support the concept of abfraction, but little experimental evidence exists.

The term abfraction was first published in 1991 in a journal article dedicated to distinguishing the lesion. The article was titled "Abfractions: A New Classification of Hard Tissue Lesions of Teeth" by John O. Grippo.[4]



This article introduced the definition of abfraction as a "pathologic loss of hard tissue tooth substance caused by bio mechanical loading forces". This article was the first to establish abfraction as a new form of lesion, differing from abrasion, attrition, and erosion.

Sign Symptoms:



Abfraction lesions will generally occur in the region on the tooth where the greatest tensile stress is located. In statements such as these there is no comment on whether the lesions occur above or below the CEJ. One theory suggests that the abfraction lesions will only form above the CEJ. However, it is assumed that the abfraction lesions will occur anywhere in the cervical areas of affected teeth. It is important to note that studies supporting this configuration of abfraction lesions also state that when there is more than one abnormally large tensile stress on a tooth two or more abfraction lesions can result on the one surface.

When looking at abfraction lesions there are generally three shapes in which they appear, appearing as either wedge, saucer or mixed patterns.[6] Wedge and saucer shaped lesions are the most common, whereas mixed lesions are less frequently identified in the oral cavity. In reference to figure 1, wedge shaped lesions have the sharpest internal line angles and saucer/mixed shaped lesions are either smooth internally, or a variety

Causes

As abfraction is still a controversial theory there are various ideas on what causes the lesions. Because of this controversy the true causes of abfraction also remain disputable.[] Researchers have proposed that abfraction is caused by forces on the tooth from the teeth touching together, occlusal forces, when chewing and swallowing.[These lead to a concentration of stress and flexion at the area where the enamel and cementum meet (CEJ) This theoretical stress concentration[and flexion over time causes the bonds in the enamel of the tooth to break down and either fracture or be worn away from other stressors such as erosion or abrasion.] The people who initially proposed the theory of abfraction believe the occlusal forces alone cause the lesions[13] without requiring the added abrasive components such as toothbrush and paste or erosion.[

If teeth come together in a non-ideal bite the researchers state that this would create further stress in areas on the teeth.[Teeth that come together too soon or come under more load than they are designed for could lead to abfraction lesions.[The impacts of restorations on the chewing surfaces of the teeth being the incorrect height has also been raised as another factor adding to the stress at the CEJ.

Treatment

Treatment of abfraction lesions can be difficult due to the many possible causes. To provide the best treatment option the dental clinician must determine the level of activity and predict possible progression of the lesion.[] A No.12 scalpel is carefully used by the dental clinician to make a small indentation on the lesion, this is then closely monitored for changes. Loss of a scratch mark signifies that the lesion is active and progressing.

It is usually recommended when an abfraction lesion is less than 1 millimeter, monitoring at regular intervals is a sufficient treatment option. If there are concerns around aesthetics or clinical consequences such as dentinal hypersensitivity, a dental restoration (white filling) may be a suitable treatment option.

Aside from restoring the lesion, it is equally important to remove any other possible causative factors.[2] Adjustments to the biting surfaces of the teeth alter the way the upper and lower teeth come together, this may assist by redirecting the occlusal load.[2] The aim of this is to redirect the force of the load to the long axis of the tooth, therefore removing the stress on the lesion. This can also be achieved by altering the tooth surfaces such as cuspal inclines, reducing heavy contacts and removing premature contacts.[If bruxism is a deemed a contributing factor an occlusal splint can be an effective treatment for eliminating the irregular forces placed on the tooth

Tooth wear



Tooth wear refers to loss of tooth substance by means other than dental caries. Tooth wear is a very common condition that occurs in approximately 97% of the population. This is a normal physiological process occurring throughout life; but with increasing lifespan of individuals and increasing retention of teeth for life, the incidence of non-carious tooth surface loss has also shown a rise. Tooth wear varies substantially between people and groups, with extreme attrition and enamel fractures common in archaeological samples, and erosion more common today.

causes:

- ★ Abrition
- ★ Attrition
- ★ Abfraction



Treatment

Once the cause of tooth wear has been identified and a preventative regime has been put in place, the patient should be reviewed for 6–12 months to establish that the intervention has been successful before any active management is carried out. Once this has been achieved a decision needs to be made whether or not it is necessary to carry out restorative treatment or if it can simply be managed by non invasive methods.[24]

Where restorative treatment is necessary, it must be decided whether to conform to the existing occlusion (typically for moderate wear, where only a few teeth are affected) or reorganise the occlusion (severe wear, unstable occlusion). Where the occlusion is reorganised this can first be tested using reversible method i.e. hard occlusal splint. A decision is made after full occlusal assessment including assessment of contacts in intercuspal position (ICP) and retruded contact position (RCP) as well as analysing casts articulated in a semi-adjustable articulator to use for a diagnostic wax up of any proposed restorative work.

Active restorative management depends upon the location of the wear (localised or generalised), the severity of the wear, and the patient's occlusal vertical dimension (OVD), which may have changed as a result of tooth wear. There are three different potential scenarios.

excessive wear with loss of OVD

excessive wear without loss of OVD but with space available

excessive wear without loss of OVD but with limited space available



Edit with WPS Office