

BRUXISM/BRUXOMANIA, CAUSES AND MANAGEMENT.

Abstract

The term bruxism is derived from the French word, "La Bruxomanie" suggested by Marie and Pietkiewics in 1907.

Bruxism has been defined as "a nonfunctional, voluntary or involuntary mandibular movement which may occur during the day or night, manifested by the occasional or habitual grinding, clenching or clicking of the teeth". References to grinding or "gnashing" can even be found in the Old Testament of The Holy Bible

Key Words

Parafunctional, Bruxing, Subconscious.

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INTRODUCTION:

It is quite common for parents to report that their child grinds his teeth and that often while the child is sleeping this grinding can be heard beyond his bedroom. Parents question dentists about the damage that might occur to the teeth and about ways to stop the child from bruxing. It usually occurs without the patient's awareness during sleep. Day time Bruxism (bruxomania) is usually semi voluntary.

INCIDENCE AND PREVALENCE: The actual prevalence of bruxism is difficult to say due to the fact that it is performed at a subconscious level by most individuals. Asking bed partner is more reliable indicator. But it is estimated to be present in 5-20 % of total population. 80% of all bruxers may be unaware of the habit. It is suggested that the incidence of bruxism may be higher if the subject has a stressful career. There is no evidence to support any difference between males and females.

CLASSIFICATION: DAYTIME bruxism/bruxomania can be conscious or subconscious and may occur along with parafunctional habits. NIGHT bruxism is subconscious grinding of teeth characterized by rhythmic patterns of masseter.

ETIOLOGY: The aetiology of bruxism is controversial and often uncertain. It is likely that an individual will have one or a combination of causal factors, however, there is current literature which suggests that a centrally (central nervous system) mediated response combined with stress

is the most likely aetiology in most cases. Various factors could be:

LOCAL FACTORS:- a) Discrepancy between centric relation and centric occlusion.
b) Gingival flaps of third molars (Pericoronitis).
c) Any type of periodontal disease with pain.
d) Surface irregularities of lips, cheek and tongue.
e) Pain or discomfort of TMJ and jaw muscles.
f) Jaw malformations

SYSTEMIC FACTORS:- Magnesium deficiency, Chronic abdominal distress, Intestinal parasites.

OCCUPATIONAL FACTORS:- Compulsive over achievers, Over enthusiastic students.

OTHER FACTORS:- Musculoskeletal disorders (cerebral palsy), Subclinical nutritional deficiency, Allergy, At the onset of schizophrenia, Endocrine disturbance, Emotional stress.

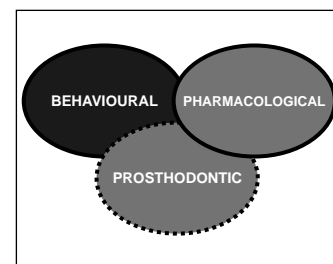
There is evidence that smoking and alcohol consumption can trigger bruxism. Antidepressants and antipsychotics may also exacerbate bruxism. There is an increase in bruxism in those who abuse amphetamines and other 'recreational' drugs.

EFFECTS OF BRUXISM: Certain amount of tooth wear is physiologic, but accelerated wear is seen in bruxism. It can cause tooth mobility, hypersensitivity, tooth fracture, periodontal pain, may contribute to masticatory system disorder, temporalis muscle pain, TMJ problems like locking/clicking/pain, headache, earache, cheek

ridging, enlarged muscles of mastication. It has been associated with implant failures by affecting osteointegration. It may lead to gross maxillofacial malformations like MIDFACE COLLAPSE SYNDROME



TREATMENT OF BRUXISM:



- **BEHAVIORAL:** This includes
- Visual imagery
- Relaxation tapes before going to sleep
- Stress management
- Nocturnal biofeedback
- Counseling

- Hypnosis
- Deep breathing exercise
- Psychotherapy.

PHARMACOLOGICAL: This is intended for short term use only. This includes use of drugs drugs like

- **BENZODIAZEPINES:** Diazepam, Clonazepam, etc may be beneficial for short term but cannot be used long term due to dependency.
- **MUSCLE RELAXANTS:** Cyclobenzoprine
- **BOTULINUM TOXIN-A (BTX-A):** In very refractory cases. It decreases masseter muscle hypertrophy.
- **CALCIUM AND PENTOTHENIC ACID:** may be helpful as they are often used in treating involuntary muscle movement.
- **NUTRITIONAL ADVICE:** such as a hypoglycaemic diet avoiding fast food, red meat, refined sugars, saturated fats etc. may decrease the habit.

PROSTHODONTIC: This includes OCCLUSIVE APPLIANCES/ SPLINTS/ PROTECTORS.

They are of various varieties and could be customised or Pre-fabricated. They provide temporary effect as they protect teeth but do not stop bruxism. They may not always be sufficient on their own for splints do not treat the cause of the bruxism and in 20% of cases do not significantly improve the symptoms.

OTHER: These include:

- A typical sound alarm setup for the treatment of bruxism: A strain guage is used between teeth and alarm gets activated when pressure exceeds a predetermined level.
- Liquid - filled bilaterally sleeved capsule: Appliance equipped with rods to which a capsule filled with salt/capsaicinoids etc can be attached which gets ruptured during bruxing.
- Physical therapies such as stretching and spraying with vapocoolants, exercises, ultrasound techniques, transcutaneous electrical stimulation, injection with saline solution or local anaesthetic may help alleviate pain and treat dysfunctional muscles

Till today no entirely satisfactory treatment has been identified in managing bruxism and that practitioners may not be able to stop bruxism in some cases, regardless of the techniques they use

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