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شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

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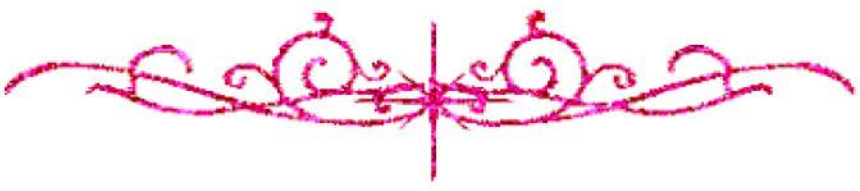

بالرسالة صفحات لم ترد بالأصل

Evaluation of bite appliance and / or joint space lavage in the management of anterior displacement of the disc of temporomandibulr joint.

Evaluation of bite appliance and/or joint space lavage in management of anterior displacement of the disc of temporomandibular joint

Thesis

Submitted in partial fulfillment of the requirements for

Master Degree in Oral Surgery

By

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﴿ ... رَبِّ أَوْزِعْنِي أَنْ أَشْكُرَ نِعْمَتَكَ الَّتِي أَنْعَمْتَ عَلَيَّ وَعَلَى وَالِدَيَّ وَأَنْ أَعْمَلَ صَالِحًا
تَرْضَاهُ وَأَصْلِحْ لِي فِي ذُرِّيَّتِي إِنِّي تُبْتُ إِلَيْكَ وَإِنِّي مِنَ الْمُسْلِمِينَ ﴾

صدق الله العظيم

سورة الأحقاف (١٥)

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Contents

Introduction and Review of literature

Internal derangement implies generally a localized mechanical fault which interferes with the smooth action of joint, so it is defined as abnormal relationship of the articular disc to the condyle so that the disc can no longer work in harmony with the condyle.[1]

It occurs in up to 28 % of the adult population [2, 3, 4, 5].

Etiology of internal derangement are acute trauma [6], (involves an external source of injury to TMJ e.g blow of the mandible). Internal derangement can also be the end result of pain dysfunction syndrome, bruxism, abnormal occlusion and forcible hyperextension of the mandible and developmental or acquired defects [7]

Occlusal condition also have impact on TMJ disorders in at least 2 ways, the first relates to how the occlusion condition affect the orthopedic stability of the mandible, as it loads against the cranium. The patients with orthopedic instability and bruxism are therefore more likely to change position of the condyles in the fossae. The second way is how acute changes in the occlusal condition can influence mandibular function that can lead to TMJ symptoms[8,9].

We can also add to the etiologic factors the emotional stress which can create problems and orthopedic instability which exists when the unstable intercuspal position of the teeth is not in harmony with the muscles [10].

Additionally There are some factors that may predispose to the disc derangement disorders :

1 - Steepness of the posterior slope of the articular eminence because this steepness is more likely to delineate greater condyle – disc movement during function, leading to increase risk of ligament elongation leading to disc displacement [11,12] .

2 - Morphology of the condyle and fossa (flat or globe like condyles that articulate against inverted V shaped temporal component seem to have increased incidence of disc derangement disorder leading to disc displacement disorder [13] .

3 - Increase Joint laxity : Some Joints show more laxity than others[14,15] .

4 - Attachments of the superior lateral pterygoid muscle:

This muscle originates at the infratemporal surface of the greater wing of sphenoid and attaches to the articular disc and neck of the condyle. If the attachment of the muscle is greater to the neck of the condyle or less to the disc this leads to that muscle function will has correspondly less influenc [16] .

Anterior displacement of the disc is the most frequent derangement involves TMJ , although displacement can occur in all direction [5,17,18] .With anterior displacement there is elongation of the retrodiscal tissue . In the early stages of the disorder, opening of the jaw allows the disc to assume a normal relationship between the condyle and articular surface of the temporal bone .

This disorder termed anterior displacement with reduction and is often associated with a well defined clicking sound, as the disorder progresses the disc moves further forward and its configuration may become deformed . Reduction occurs at a later phase of jaw opening and in general it is thought that the later the clicking sound during mouth opening, the more severe the derangement [19] .

As the displacement progresses , the disc may remain anterior to the condyle in all phases of jaw movement, this condition is referred to as anterior displacement without reduction and is often associated with disappearance of the clicking sound. The disc configuration becomes elongated and the normally sharp demarcation between the disc and its posterior attachments may become less distinct . Not uncommonly the posterior band becomes progressively thickened and can fold on it self with jaw opening. The disc may become entrapped between the condyle and fossa limiting jaw movement .

In late stages, the chronically deranged disc may become biconvex, the chronically displaced and thickened disc cannot function properly, even if it is positioned correctly.

Chronic anterior displacement can lead to disc perforation, which usually occurs in the bilaminar zone but may involve the disc itself. Perforation allows direct contact of the articular cartilage to the condyle and glenoid fossa leading to degenerative joint disease.

Schellhas and coworkers[20] described the MRI appearance of the osteochondritis conditions and avascular necrosis of the mandibular condyle. They stated that this condition is often associated with the pre- existing internal derangement.

Disc displacement have been noted to occur in all directions and this fact has been implicated as a major contributor to the false negative rates in both patient and cadaver studies evaluating the internal derangement [5,17,21] .

Autopsy specimens have revealed the occurrence of medial and lateral sideways displacements, as well as, combination of anterior and mediolateral displacements which have been termed rotational displacements [18] .

Katzberg in 1989 [5] has devised a classification scheme categorizing the various displacements into: normal , anterior , anteromedial , anterolateral and lateral subgroups. The value of coronal MRI imaging has been emphasized to better detect of these variations [22] .

The anterior displacement of the disc are two types :

First: anterior displacement of the disc can be with reduction and this represent the early stages of the disc displacement disorders . Characterized clinically by relative normal range of movement with restriction only, associated with pain. Discal movement can felt by palpation of the joints during opening and closing. Deviation of the opening pathway are common. *Second*: anterior displacement of the disc without reduction as the disorder progresses the disc moves further forward and remains anterior to the condyle in all phases of jaw movement. If the inferior retrodiscal lamina andthe discal collateral ligament become elongated, the disc can