

Treatment of Bruxism and Temporo mandibular Disorders

Azhar A.M.Ali
Medical technical Institute

الخلاصة :

صريف الاسنان مع الالم الوجهي العضلي وطقطقة المفصل الفكي الصدغي و تأكل الاسنان هي من اقدم المشاكل التي يعاني منها البشر منذ بدء الخليقة .
تم دراسة هذه الحالة على 35 مريض عراقي (21 ذكر و 14 انثى) خلال العام (2007-2008) اظهر ان الذكور يتاثرون اكثر وان الفئة العمرية الاكثر تأثراً هي ما بين (30-40 سنة) وكذلك أظهرت الدراسة ان مشاكل المفصل الصدغي كانت الاكثر في الذكور ايضاً. بينما الاناث اظهروا مشاكل اكثر في الاطباق العلاج كان باستعمال ادوية مرطبة للعضلات وباستعمال جهاز الحامي الليلي مع استعمال الحرارة للمنطقة المتأثرة ولمدة ثلاثة اشهر وكان تقدم العلاج واضحاً مما ادى الى الشفاء التام خلال هذه الفترة.

Abstract:

Bruxism with myofacial pain and clicking of T.M.J is a condition which includes grinding or clenching of teeth and its one of the oldest dental problem in human beings.

Studying the condition on 35 Iraqi patients (21 males and 14 females) through the year (2007-2008) showed that males are more affected and the most affected group is the (30-40 year) age, and also the Tempromandibular joint dysfunction showed highest results in male, while traumatic occlusion in females is more obvious.

Treatment with muscle relaxant and using night guards with the aid of physiotherapy improve the condition through three months dramatically.

Introduction:

Bruxim is a condition in which you grind, gransh or clench your teeth, If you have bruxism you may unconsciously clench your teeth together during the day or grind them at night.

Bruxim may be mild and may not even require treatment. However, it can be frequent and sever enough to lead to jaw disorders, headaches, damaged teeth and other problems like hypermobility of teeth and may also contribute to adaptive changes in Temporo mandibular joint, resulting in flatting of the condyles and gradual loss convexity of the condylar eminence ^[1].

The most difficult bruxism problem to be facing is the patient who has worn the entire occlusions and has shortened the anterior teeth into an end to end relationship ^[2].

Many patients do not realize they have a bruxism clenching problem, often they have nearly destroyed their dentition before a dentist educates them about destructive chewing habit. ^[3]

One of the theories of treatment of bruxism is using night guards which has a significant effect on reducing the mortality associated with sleeping force ^[4]

It is also used in the treatment and prevention of oral and facial injuries in teeth and periodontium. ^[5]

Fitted night guard considered as an essential aid in treatment as the majority of attrition in upper and lower anterior teeth especially in centrals is prevented when night guard is worn, so it plays an important role in providing protection of enamel of teeth during sleep from force of friction ^[6,7]

The most common reasons for wearing a night guard are to protect the teeth in patient with bruxism to improve jaw, muscles and Temporomandibular joint function and to relieve related pain ^[8]

Traumatic occlusion and occlusal habits such as clenching and grinding are the cause of many dental problems, materials used in construction of night guard should be odorless, tasteless and not irritating to the oral tissues and it is generally believed that ethyle vinyl acetate is the most suitable material to use ^[9] however thick and solid material like heat cure clear acrylic is also very popular material for construction of such devices.

The aim of the study is to examine whether the night guard is suitable treatment method for bruxism, Temporo mandibular joint disorder, joint pain and clicking in Iraqi patients during the year (2007-2008) .

Material and Method:

A sample of 35 patients, (21 males and 14 females) average age (30 years) range (20-40 years) with myofascial pain, bruxism and joint clicking and pain for one year duration attending the clinic of medical technical institute from September 2007 until September 2008 were examined.

Samples divided into 3 groups according to their complaint which includes bruxism, traumatic occlusion and temporomandibular dysfunction.

Examination was first done by the researcher and after that an impression with alginate impression material was made for each patient for the upper and the lower jaw, casts were poured by dental stone. The casts mounted on an articulator by the aid of face bow and by taking centric jaw relation which was transferred to the articulator.

A sheath of wax was inserted between the occlusal surface of upper and lower casts to its shape so that the wax patterns will transfer to a dental flask.

Flasking, packing with heat cure clear acrylic, curing and deflasking was done in the usual manner that used for acrylic dentures. Finishing, polishing and then insertion of the night guard was done in patient mouth.

The night guard should enclose the teeth to the distal surface of end molars, and its thickness labially should be 3mm. While occlusally 2mm and 1mm lingually or palatally, labial flange should extend to within 2mm of vestibular reflection, while the edge of the labial flange should be rounded but edges in lingual and palatal should be tapered.

Treatment was carried out for 3 months, patient wore their appliance only at night, symptoms questioners were used to assess the problem ^[10]

Results:

Results showed that generally male are effected more than females, also male age range (30-40 year)are more affected than females as seen in (Table-1) and (Fig-1).

	20-29 Years	30-40 Years	Total
Male	6	15	21
Female	3	11	14
Total	9	26	35

Table (1) Age and sex Distribution of the patients
 * Chi-square = 0.224 P=0.636 P>0.05 Non Significant

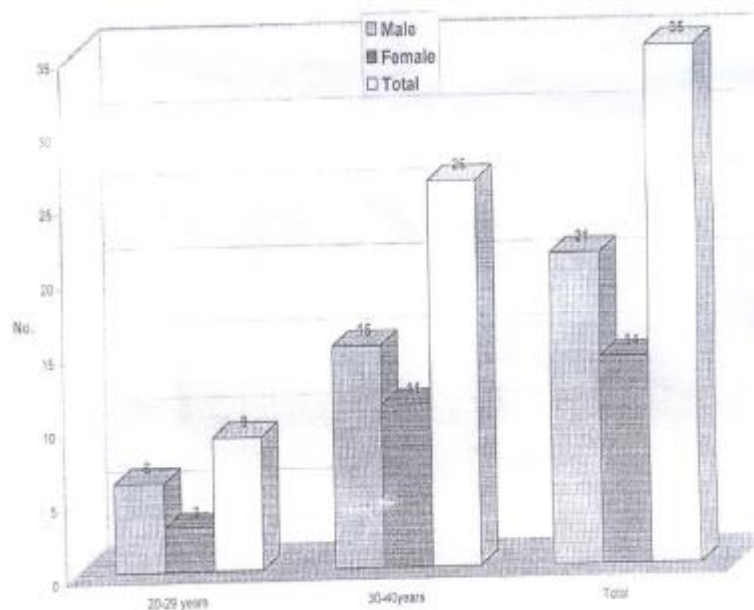


Fig-1

While tempromandibular joints dysfunction showed highest results in male and also occlusal habit in male showed higher results than others. Traumatic occlusion in females is more obvious, it can be seen in (Table-2) and (Fig-2).

Tramatic occlusion		Occusal habits		T.M Jdysfuent	
Male	Female	Male	Female	Male	Female
2	4	9	6	10	4
6		15		16	

Table-2

*** Chi-square = 2.540 P=0.026 P>0.05 Non Significant**

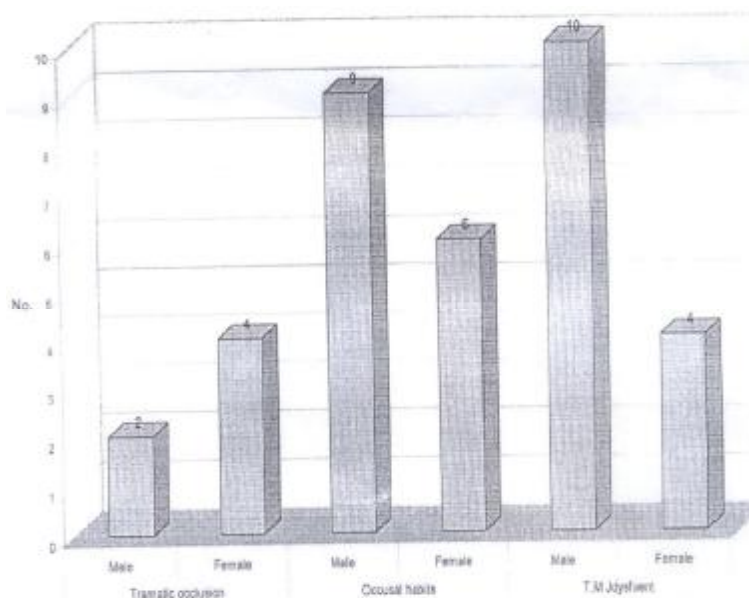


Fig-2

Treatment of these patients with muscle relaxant and using night guards with the aid of physiotherapy by heat application for 3 months lead to relief of symptoms and disappearance of pain and joint clicking.

Discussion:

Making the study in year (2007-2008)in our country was an important factor in increasing the level of stress in male as we all knew psychological disturbance in these patient were evident.

Patients that showed traumatic occlusion were examined and occlusion correction were done for them after that medication were prescribed for them (Diazepam 2mg at night).with the aid of physiotherapy(heat application on T.m.J)and lasting they were provided with night guards that are made of heat cure polymerized clear acrylic resin, results showed a dramatic improvement in

lowering T.m.J pain and discomfort as well as disappearance of clicking while bruxism was disappeared within 3 months duration and this was in agreement with christensen ^[1] 2000 who advice the patient to wear night guards even at day time when they are psychological stressed.

Conclusion:

Bruxism and T.m.J disorder have been present since the beginning of human beings.

These conditions may cause a total destruction of the dentition, proper patient education, treatment by restoration, balancing the occlusion and provided the patient with night guard will allow these patients to live normal life without significant tooth wear or other dental handicaps.

References:

- 1- Sprigi, M. and Brender, P. (1997). Chevrolet 21:sso schawies monatssch Zahuhelikd
- 2- Unger, F.I. (2001). Rev.stomatolchair maxillo fac. 102(1):47-54.
- 3- Gordon, J. Christansen. (2000). JADA vol.(3)
- 4- Sear,VHS occlusal pivots J.porsth.Dent.6.332 (1956).
- 5- Padilla, R. (1993). Balikovs2 sports dentistry coming of age in 90's J. California Dent.Association 27-34.
- 6- Padilla, R.; Dorney, B. and Balikvos, S. (1996).Mouth guard.prevention of oral injuries, California dent. Association. Vol.: 24, No.3
- 7- Chapman, P.J. (1998). Mouth guards and spots dentisy, dental health week.
- 8- Chapman, P.J. (1989). Mouth guard and role of sporting team Deutists, Australia Dent.Journal 34 (1):36-43.
- 9- Davies, S.J. and Gray, R.J. (1997). Dent. J. 1831(7) 247-51.
- 10- Williaman, E.H. And Sheffied, J.W. (1985). The non surgical treatment of internal derangement of tempromanibular joint a survey of 3000 case facial ortho.Tempromandibular Arthol 2(10):18-21.
- 11- Gordon, J.Christensen. (2000). Treating bruxism clenching. Journal of American dental association vol.131.234.