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TEMPOROMANDIBULAR JOINT PROBLEM : REPORT OF CASES. (รายงานผู้ป่วย(Temporomandibular Joint Problem))

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ABSTRACT

Pain from mastication can be experienced as a discomfort about the face and mouth induced by function and parafunction of the jaws. Masticatory pain has its source in the temporomandibular joints (TMJs) and/or masticatory muscles, and is therefore, directly related to masticatory functions.

The main symptom of the myofascial pain dysfunction (MPD) syndrome is a unilateral dull ache of myofascial origin arising from the so-called myofascial trigger zone, located within a muscle or its tendinous attachments.

This paper intends to report the management of two cases of idiopathic facial pains such as TMJ or MPD syndromes, with an added objective of portraying as clearly as possible, the clinical setting that can provide a better foundation for the diagnosis and treatment of this syndrome.

The etiological factors that elicited this so-called "facial pain" for the two TMJ patients were: occlusal disharmony, excessive emotional stress and trauma from dental work. The combination of conservative treatments was used for the duration of treatment with a high success rate.

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Introduction

Contemporary dentists ought to be more experts in the diagnosis of toothaches. Patients who suffer from a number of craniofacial pains visit dentists and these problems have to be dealt with effectively. Craniofacial pains can occur as a muscle pain, temporomandibular joint (TMJ) pains, in - cranial nerve pathology, neoplasia, or as a result of psychogenic or vascular origin and as a drug side-effect. Usually, a detailed history is sufficient for a successful management.

Trauma to the TMJs may cause a hypertranslation of a condyle which becomes anterior to the articular eminence and in turn induces a unilateral and annoying ache just infront of the ear. Usually in these cases, there is no radiographic evidence of bony-alterations of the TMJ. Although patients will likely experience muscle-splinting. Under emotional stress or general fatique, this type of pain tends to increase. It will decrease with the application of heat at the site of pain, which resembles the pain produced by interceptive occlusal contacts in dental restorations. It can also be generated by different factors such as jaw manipulation during intubation for general anesthesia, extraction of lower molars, endodontic therapy on lower molars, whiplash injury and lateral blows to the mandible in contact sports. Another characteristic of this kind of pain is that it may not develop until two or even three months after the hypertranslating trauma.

Following are two cases dealing with TMJ problems.

CASE 1

The patient was a 30-year-old Thai businessman. The first discomfort symptoms arose in early morning during a short business visit to U.S.A. During the first two days, the pain at the left jaw was gradually increasing. After he came back to Thailand, he went to a private dental clinic. He reported the symptoms as being intermittent pain at the left TMJ area, and as acute pain in the same area when chewing, yawning and during lateral excursions of the jaw. He noted also a limitation of jaw opening (open-locked). The dentist prescribed analgesics (paracetamol) and antibiotics (penicillin V). Unfortunately, the problem was still persisted.

Two days later, the patient presented to another dentist with the same complaints. He was suggested to stop taking the antibiotics and continue taking the paracetamol. He then was given an appointment for the next day at the School of Dentistry, Chulalongkorn University, Department of Oral Surgery for X-ray of both joints (transcranial view).

There were no detectable radiographic abnormalities. He then was referred to the Occlusion Department.

By this time, the patient was getting desperate about his situation. He had been in pain for seven days. The last two days, he had taken valium (4-6 mg. per day) without a physician's prescription to enable him to sleep.

The patient was reexamined thoroughly at the Occlusion Department. He had an open-locked condition (10 m.m. width). The lateral movement to the left side was limited (2 m.m.). In palpating the masticatory and related muscles, the patient showed acute pain at the left temporalis, left masseter and left lateral pterygoid muscles. There was a tension of the left sternocleidomastoid (SCM) muscle. His occlusion demonstrated as follows: anterior open-bite and light malocclusion; tooth # 12 crossbite; anterior crowding; lower anterior teeth spacing; occlusion of both sides teeth were in group-functioned; in

protrusive position, teeth # 12 and # 42 interfere and there was no other contact of teeth; interferences by teeth # 46 and # 16, # 47 and # 17 when making lower jaw movement to the left.

Differential Diagnosis

The impression were that the problem had no relation to the common headache, migraine and Tic Douloureux. The clinical findings pointed out to MPD, occlusal disharmony and may be psychophysiological disorder due to excessive stress. The treatments were decided accordingly.

Treatment and Results

At the first visit, ethyl chloride spray was applied at the trigger zone areas. The patient was asked to do the open-close cycle after the vapocoolant spray. The topical anesthetic agent suddenly breaks the spasm-pain cycle and relaxes the muscle. Fifteen minutes later, the jaw opening was of one finger-breadth (15 m.m.). The Lucia-jig (appliance similars to the incline-plane) was fabricated by applying Dura-Lay on the upper front teeth. The purposes of this treatment were to weaken the perceptive function of the proprioceptive sensory input and to relax the masticatory muscles. The Lucia-jig was permanently worn by the patient for two days except during meals.

On the second visit (two days later), the impression of the upper teeth with the Lucia-jig out of place was taken. A hard clear plastic plated of 0.08 inches thickness was vacuumed on the upper model to perform a template. The template then was relined with cold-cure acrylic for fabricating of an occlusal splint. The occlusal splint was adjusted to a smooth plane and to have lingual incline at the palatal site, while the mandible was manipulated in centric relation (CR). The lateral movements were adjusted to be a group-functioned occlusion. The patient was asked to wear the occlusal splint permanently except during meals.

The patient came two weeks later for a third visit. At that time, the jaw opening was of 30 m.m. the muscle pain had alleviated and there was only minimal pain at the left TMJ and the left SCM when chewing hard food and when turning the head to the left side. The left temporal area pain had completely subsided. The muscles were much less tensed and the mandible could comfortably be manipulated to the centric relation occlusion (CRO) position.

The splint was readjusted nearest to the true CRO position. Tooth # 28 was decided to be extracted because there was no opposing tooth and it was interfering with tooth # 37 during lateral excursions. The patient kept wearing the occlusal splint for another two weeks.

On the fourth visit, two weeks later, the pain had completely subsided. The type of occlusion could be determined in many positions: CO, CRO, protrusive and lateral movement positions. The same jaw opening of 30 m.m. was noted. The patient was referred for a full-mouth X-ray (periapical view). There were no pathological abnormalities, no widened periodontal space and no pathology of the alveolar bone observed. The premature contacts of teeth both in CR and CRO positions were expected to be corrected by the tissues' adaptive ability. The judgement felt that selective grinding of the interfering teeth during lateral movements was sufficient.

One week later, the patient came for the fifth visit. The teeth were cleaned thoroughly and oral hygiene instructions were given. He was asked to visit once a month and to call on if any problem arose in the meantime.

The nine consecutive monthly examinations were exercised. Examinations of each visit showed a gradual improvement in the patient's condition. No pain and other complaints had been experienced since the fourth visit and none ever reoccurred. At the last visit, everything was back to normal, after ten and a half months from the first signs of discomfort.

CASE 2

The patient was a 25-year-old single Thai female. On May 4, 1983, she underwent extractions of four wisdom teeth. She had been experiencing discomfort at the left TMJ and acute pain at the lower left wound site ever since. For three weeks following the operation, she had been taking paracetamol (two tablets every four hours). For the last two days of that same period, she took 2 mg. of valium before bedtime to help her sleep. Her medical history showed that she had had headaches once-a-week for a period of two years. The problem was reported as due to incorrected eye contact lenses.

The clinical findings from the first visit were: maximum jaw opening of 45 m.m.; pain at left TMJ area; mandibular deviation to the left side during jaw opening; pain at left masseter and left medial pterygoid muscles; slightly left posteroanterior slide (0.5 m.m.); at right side, premature contact in CRO (teeth # 15, # 45 and # 16, # 46); slight interferences of the inner inclines of teeth # 27, # 37; # 16, # 46 and # 17, # 47. There was no interference in protrusive contact.

Differential Diagnosis

The impression were that the only cause of discomfort was the trauma experienced after the extractions. It was not necessary to treat the interfering teeth in this case.

Treatment and Results

Ethyl chloride spray was applied at the site of pain and asked the patient to do open-close-cycle.

On the second day, ethyl chloride was sprayed again and asked the patient to repeat the open-close-cycle. The patient was instructed to apply moist heat at the pain site for ten minutes, three times a day and to do reflex-relaxation exercises in lateral movement for two minutes, three times a day.

The patient was seen two more times in the following month. She first reported there was improvement in the healing of the tissues and that the pain had subsided. She reported, in the last conversation, that the tissues were completely healed and everything back to normal.

In this case, note that treating the muscle and soft tissues proved to be sufficient. There was no need to correct the malocclusion to rid the patient of pain.

Conclusion

At present, the magnitude of this problem had not been fully recognized by clinicians. Although there still may be divergence of opinions in the diagnoses and treatments of MPD, the different theories are coming closer and closer. As this occurs, the managing of the TMJ patients are on a scientific basis.

There are many different possible treatments for the MPD symptoms. Those we have used were proven successful by many authors. However in the chosing of therapeutic procedures, the practitioner should aim at two main goals: (1) keep the treatements simple, and (2) allow them to be reversible. Of course, successful treatment always depends on an accurate and attentive history and examination of the case.

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รายงานผู้ป่วย
(Temporomandibular Joint Problem)

บทคัดย่อ

อาการเจ็บหรือความไม่สบายบริเวณใบหน้าและช่องปาก อาจเกิดได้จากการทำหน้าที่ของขากรรไกรล่างทั้งลักษณะปกติ และอย่างผิดปกติ จุดกำเนิดที่ก่อให้เกิดความเจ็บในอวัยวะบดเคี้ยวเริ่มที่ส่วนของข้อต่อกระดูกขากรรไกร หรือกล้ามเนื้อบดเคี้ยว กลุ่มอาการหลักของการมีความผิดปกติในอวัยวะบดเคี้ยว (myofascial pain dysfunction syndrome-MPD) คืออาการเจ็บแบบทื่อ ๆ มักเกิดด้านเดียวของกล้ามเนื้อ หรือเนื้อเยื่อของใบหน้า

บทรายงานนี้เป็นลักษณะของผู้ป่วยจำนวนสองราย ที่มีการเจ็บบนใบหน้าโดยไม่ทราบสาเหตุมาก่อน นั่นคืออาการของ TMJ หรือ MPD syndromes ซึ่งได้กล่าวถึงแนวการเตรียมและหาข้อมูลจากผู้ป่วย และนำไปสู่การให้การรักษากลุ่มอาการโรคดังกล่าว

สาเหตุที่ก่อให้เกิดอาการเจ็บบนใบหน้าในผู้ป่วยที่รายงานนี้ คือ มีความผิดปกติของการสบฟัน ประกอบกับมีความเครียดทางจิตใจสูง นอกจากนี้ความบอบช้ำจากการบำบัดทางทันตกรรมก็เป็นสาเหตุทำให้เกิดความผิดปกติได้ วิธีการรักษาที่ใช้เป็นการรวมวิธีการรักษาบางอย่างเพื่อใช้รักษาความผิดปกตินี้ ซึ่งพบว่าผลการรักษามีความสำเร็จสูง

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