

## Type of intractable temporomandibular disorder and treatment protocols

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Temporomandibular disorder (TMD) can be classified as masticatory muscle disorder, capsulitis, internal derangement, osteoarthritis, and psychology-related disorder<sup>1</sup>. Most of them are cured through conservative reversible treatment and in very few cases, irreversible treatments such as surgery, orthodontic treatment, and prosthodontic treatment are applied<sup>2,3</sup>. Therefore, oral and maxillofacial surgeons should be well-acquainted with a variety of conservative therapies besides surgical therapy. If the diagnosis and treatment are performed based on adequate protocol, most of TMD tend to be well cured without complications. But some types do not show any response to the treatment and performing inappropriate treatment can cause serious complications and can create medicolegal problems. Therefore, surgeons need to be well-acquainted with each type of intractable TMD and their treatment protocols.

### 1) Psychology-related TMD

As the case where psychological factor is deeply involved, this TMD can accompany other systemic symptoms as well as pain and clicking sound. A lot of inexpressible symptoms such as fatigue or unusual displeasure occur. And pain is regarded as neuropathic pain or psychogenic pain, not somatic pain<sup>4</sup>. In many cases, these cannot be resolved by dental treatment only. Therefore, combining cooperative treatment with neuropsychiatry after explaining to patient can lead to good results.

### 2) Continuous oral parafunction

TMD is not cured well when related factors continue and relapse rate is high even though it is cured. And of the factors related to relapse, oral habits such as bruxism, clenching, and unilateral chewing have a large percentage. Correcting oral habit is the best, but on failing to do so, some devices like night guard are needed<sup>5,6</sup>.

### 3) When the disease holding period is long

The longer the patient has the disease, the less responsive

the disease to the treatment. The longer patients have the mouth opening limitation caused by the closed lock, the result of the treatment can be worse<sup>7,8</sup>. Murakami et al.<sup>7</sup> have reported that the maxillofacial surgery had failed in 5 out of 6 patients who had closed lock for over 7 months.

### 4) Patients' distrust and noncooperation

All diseases including TMD develop as chronic if they are not treated within an appropriate period. Chronic patients often accompany psychological problems and they usually have experienced a lot of diagnoses and treatments from different doctors in different hospitals. Also, as they do not trust doctors and are not cooperative, it is difficult to treat their disease.

### 5) When dentist insists on a particular treatment

The purpose of the treatment of TMD is to resolve the main symptoms such as pain and mouth opening limitation. When it does not respond to a particular treatment, other treatments should be tried or the cooperation with other department should be considered<sup>2,3,9</sup>. It is true the conservative therapy such as physical therapy and stabilization splint therapy is the most basic treatment. But, if the disease does not respond at all despite the treatment of 3-6 month, doctor needs to consider surgical therapy such as injection therapy, arthrocentesis, arthroscopic lavage and lysis, open joint surgery, prosthetic and orthodontic treatment. For a quick resolve of the main symptoms such as pain and mouth opening limitation, it is a good way to combine the semi-surgical treatment such as injection therapy in the initial stages<sup>10</sup>. It is not desirable for the doctors treating TMD to insist on a particular theory and try to solve all cases with his or her own one or two treatments. The treatment period must not be longer. Doctors should actively consider asking other doctors when their patients are not cured well.

The clear etiology, pathogenesis, and treatment of TMD have not been ascertained. The clinicians should bear in mind

their logic is not correct absolutely. It is the best way of treating intractable TMD to introduce a variety of treatments such as cooperative treatment, prosthetic treatment, orthodontic treatment or surgical treatment as well as conservative therapy.

### Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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