

# TMJ disorder and orthodontics

By Chris Farrell, BDS

“Doctor, I was fine until I had my braces on, but now I think I have TMJ.”

In every orthodontic practice, this situation arises consistently and with alarming regularity. TMJ disorder is one of the most common problems affecting millions of people each year. Yet almost every case is not properly diagnosed or treated, causing continuous pain for the patient. This is apparent even in the orthodontic office.

Studies show that “the prevalence of TMJ signs and symptoms has been noted in several reports and ranges between 35 percent to 72 percent.”<sup>1</sup>

If we refer to the American Journal of Orthodontics and Dentofacial Orthopedics, the majority of our orthodontic patients have signs and symptoms of TMJ disorder.<sup>1</sup> What is the management strategy for these patients to avoid unjustified blame being placed on orthodontic treatment?

Patients and parents are more knowledgeable than ever, with Google being the new university for the general public. It becomes difficult to say TMJ disorder has nothing to do with the orthodontic treatment.

The literature is certainly inconclusive for now about the impact of diverse orthodontic techniques, with or without extractions, on the causation and treatment of TMJ disorder. We know it is out there, but what changes need to be made to our treatment techniques to avoid the focus of attention on TMJ?

In the future, the widely used cop out of, “It’s not my problem,” will be unsuccessful against a class action.

Causes and treatments are heavily debatable. There have been prominent legal cases claiming extractions were the sole cause of TMD.

For years, professionals have been treating patients with functional appliances to prevent TMJ/D. However, there are no evidence-based techniques that confirm what you do clinically every day.

Do your techniques make TMD better or potentially worse? We must find the appropriate professionals to give the clinician a better guide than at present.

This short article is in contrast to the volumes written about TMJ/cranio-mandibular/myofacial pain disorders, with most of them being far removed from the day-to-day issues of orthodontic practice.

If the author has one suggestion, it is that orthodontists need to be aware that full evaluation of every orthodontic patient for TMJ disorder is mandatory. Every new patient should be evaluated for his or her TMJ status and should be questioned on the presence of key symptoms, such as headaches and



ear and eye pain, as well as classic TMD intracapsular symptoms.

You will be asked at some time if the patient had the symptoms before orthodontic treatment; if you have no records, you have no defense. You will need to compare this with the records during and after the orthodontic treatment. Many orthodontists do this already, but it should be a universal practice.

By association, the orthodontist can be drawn in to the TMJ/D issue.

Fig. 1: Severe case of reverse swallow, contributing to future TMJ disorder.

There is no proven link between orthodontic treatment and TMJ disorder; however, the position and function of the condyles is directly controlled by the oral structure (see Figs. 2, 3). Therefore, the orthodontist’s actions can influence the TM joints. This is a question of anatomy, not law.

So why do so many of our young patients have a prevalence of TMJ disorder?

Are they experiencing an early degenerative disease, and if this is the case, why is this problem so common?

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### New theory of TMJ disorder — the convenient truce

#### Proposition 1:

- TMJ disorder is caused by trauma to the TM joints, which causes pain in the associated cranio-mandibular muscles.
- Incorrect myofunctional habits — reverse swallow, tongue thrust and mouth breathing — cause the condyles to be distalised and traumatized 2,000 times a day. The trauma to the TM joints starts at an early age and explains the high prevalence of TMD in children and adolescents.
- Incorrect myofunctional habits cause malocclusion and TMJ disorder; this is the “smoking gun” of orthodontic treatment.



Fig. 2: Normal uncompressed TM joint.

To avoid unnecessary parent and patient legal issues on TMD:

- Identify any TMJ disorder signs and symptoms at the first consultation visit.
- Do a TMJ muscle and joint palpation on every new patient.
- Evaluate the TMJ risk assessment before commencing your ortho-

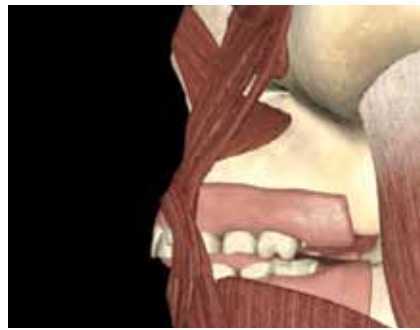


Fig. 3: Reverse swallow and tongue thrust compresses the TM joint.

odontic treatment plan.

- Have adequate TMJ/D disclaimers in your treatment plans.
- Do a soft tissue dysfunction evaluation at the first consultation and identify the real causes of the TMD. The patient with the reverse swallow and tongue thrust will undergo orthodontic treatment

### OT About the author

Dr. Chris Farrell, BDS, (Sydney University), CEO and founder of Myofunctional Research Co. (MRC), has been a clinician in private practice in Australia and England since graduating in 1971. His practice in Australia specializes in myofunctional orthodontics and treatment of TMJ disorder. Farrell will conduct educational seminars on TMJ, myofunctional appliances and practice management this fall. For more information, contact MRC at [info@myoresearch.com](mailto:info@myoresearch.com).

successfully, but without correction of these habits, TMD problems may not be resolved and symptoms could worsen.

If the malocclusion is blamed for the cause of the TMJ disorder and the pain increases during treatment, you have a problem. As we know, correcting the malocclusion does not always resolve TMJ issues.

### References

1. TMJ/D in children and adolescents: Associations between occlusal characteristics and signs and symptoms of TMJ dysfunction in children and young adults. Riolo, Brandt and TenHave. *Am J Orthod Dentofac Orthop* 1987;92:467-77. [OT](#)

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