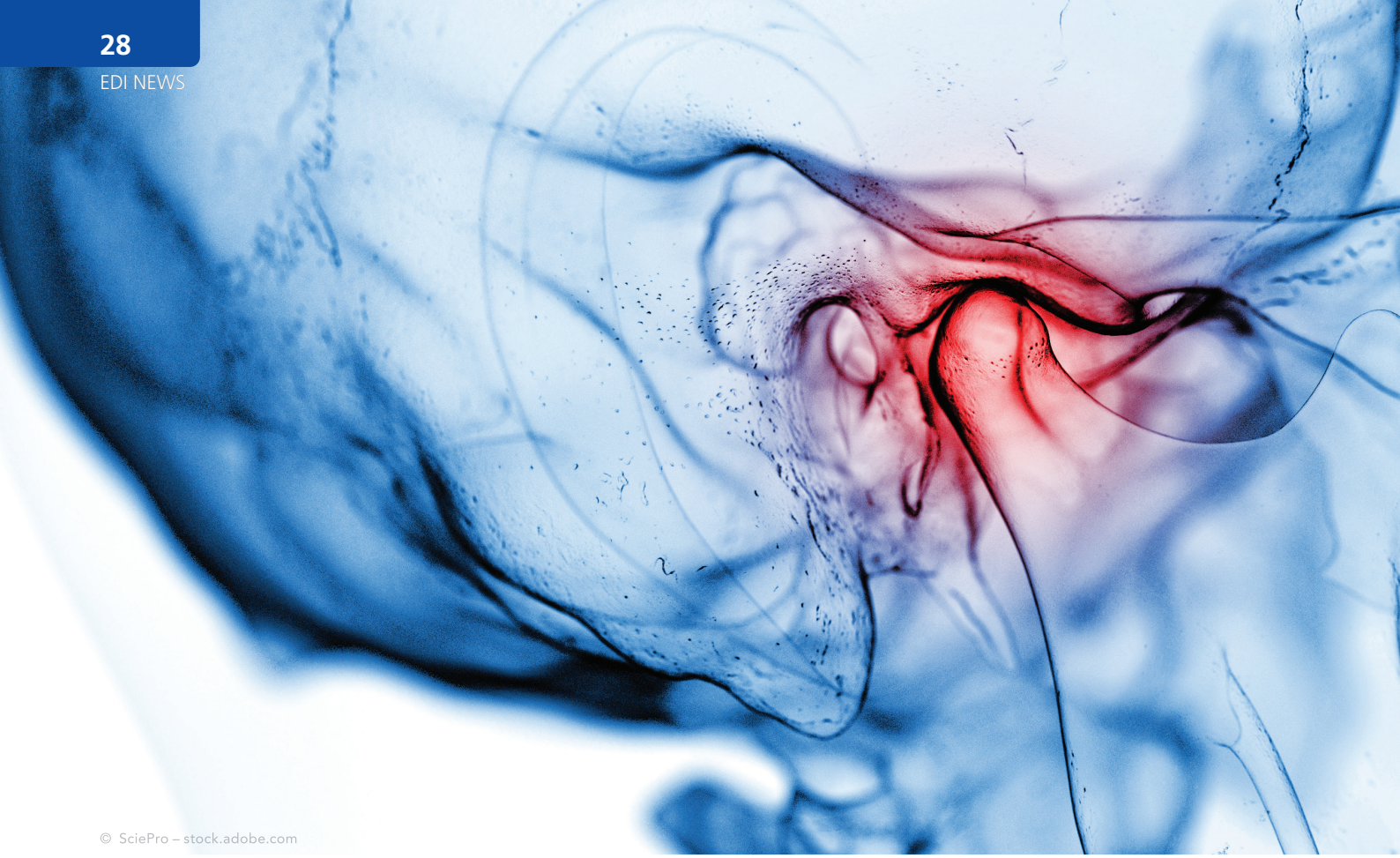


A detailed commentary by Dr Diether Reusch (Westerburger Kontakte)

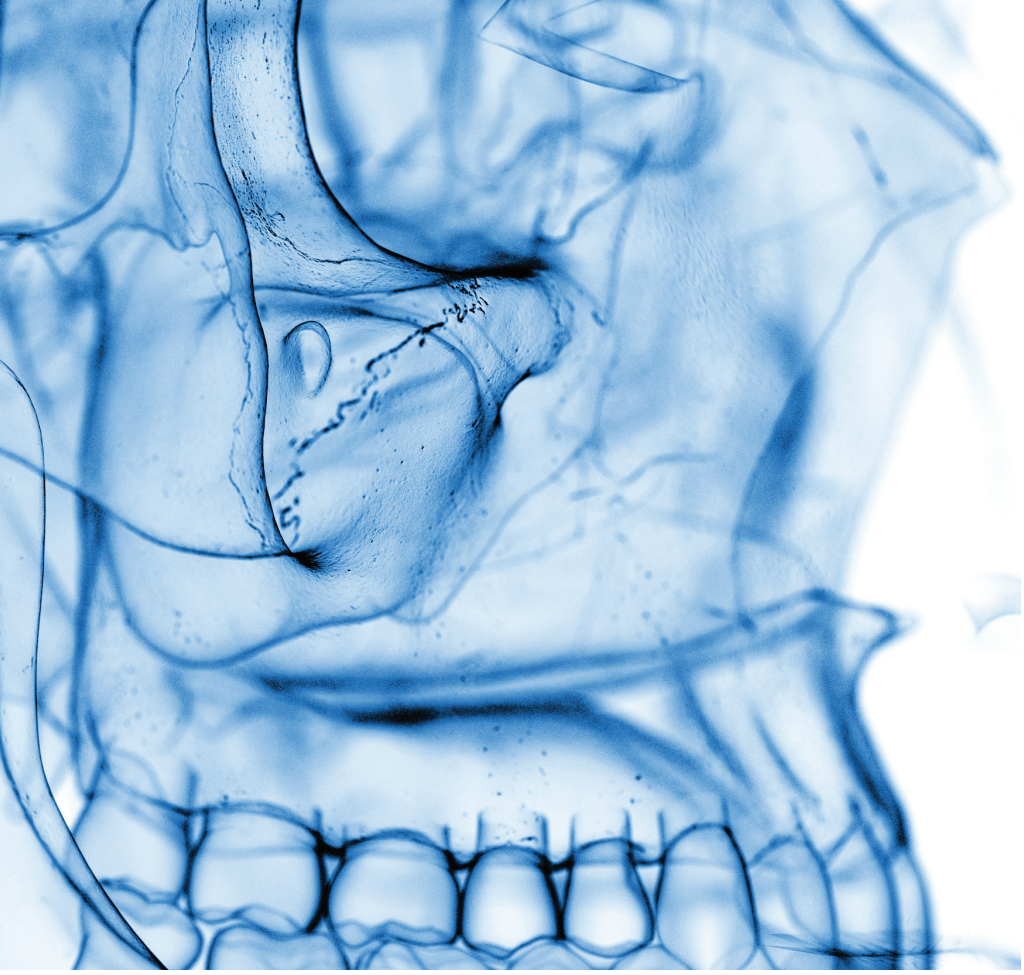
The significance of occlusion in patients with CMD

A scientific debate is currently making waves, sparked by an article in the *Journal of Craniomandibular Function* 2023; 15 (2):119–27 by Türp JC. and Greene CS. on the so-called phase 1/phase 2 strategy for the treatment of patients with craniomandibular dysfunction. Prof. Türp accuses all colleagues working in the field of occlusion and/or craniomandibular dysfunction (CMD) of following a so-called phase 1/phase 2 strategy, based on a website analysis he carried out.

Behind this strategy is a two-phase concept for treating patients with (usually painful) CMD symptoms. Following "relaxation" or "deprogramming" of the mandibular muscles, the result is said to be a permanent change in the position of the mandible relative to the maxilla and thus a "therapeutically" induced malocclusion. To restore maximum intercuspation in this mandibular position, the second phase involves occlusal adjustments, restorative/prosthetic measures and/or orthodontic/maxillofacial surgery.

Quote Prof. Türp:

"The reluctance to abandon the phase 1/phase 2 strategy may be due to the continued strong belief in the validity of this disproven therapeutic approach, or it may be financially motivated. For the patients concerned, this therapeutic approach involves many dental appointments, unnecessary and sometimes harmful interventions and high costs. At the same time, dental professional organisations have their hands tied if some dentists continue to exploit the freedom of therapeutic choice and the lack of a regulatory guideline to their advantage. This phenomenon affects dentistry not only in Germany but is found worldwide."



In short:

We dentists continue to believe in a "disproved treatment approach" or we generate many unnecessary appointments for our patients for financial gain, i.e.:

- We take time away from our patients.
- We harm our patients with our interventions.
- We make our patients pay a lot of money for an inappropriate treatment for which there is no need, i.e. in plain language, we "cheat our patients".
- All this is only possible because there are no regulatory requirements!

So much for a condensed version of the author's statements.

Regulatory requirements are laws and regulations that a company or clinic must comply with. Can this be the purpose of a guideline? As I was personally only familiar with a phase 1/phase 2 strategy in orthodontics, we did some internet research using Google and ChatGPT. Apart from Prof. Türp's article itself, the search yielded no hits.

A phase 1/phase 2 strategy is not generally known. A survey of many dentists and scientists I know came up with the same result: "not known". A scientific colleague, head of a prosthetics department, replied: "Dear Diether Reusch—yes, this is a very unusual and strange article. I cannot remember ever reading anything like it in a dental journal." This 2-phase therapy, the way it was described, was completely unknown to me until now. Instead, a multi-phase approach is always essential whenever a patient is due for a complex restorative treatment for completely different reasons, but the patient also suffers from CMD or has a history of CMD. In these cases, the restorative treatment should follow an overall concept with the aim of biomechanical optimisation, including functional pretreatment and testing of the expected result using splints, wax-ups, mock-ups, etc. This is where a multi-phase approach makes sense.

Somehow, I could not shake off the impression that the authors had overinterpreted the selected websites. Such websites always focus on the main capabilities of the clinic or practice and never give any information about the evidence-based nature of the therapeutic procedure in individual cases. If you want to find out whether someone can provide evidence-based treatment, you will have to ask the dentists in question or present them with case vignettes in order to find out something about their treatment planning in individual cases. The approach taken in the article did not seem valid to me.

The next step was that I commissioned an agency to carry out a completely neutral Google analysis of 50 dental websites on the subject of "CMD—craniomandibular dysfunction" on behalf of the DGÄZ. No influence was exerted on the persons entrusted with this task, which can be substantiated by an affidavit.

1. None of the websites mentioned a so-called phase 1/phase 2 concept.
2. Nine websites mentioned that corrections to existing dentures may occur. I explicitly agree with this. ~20%
3. Two websites state that temporary bite corrections can be made. ~1%
4. Seven sites stated that prosthetic measures may need to be considered. ~14%
5. Four sites mentioned the need to consult an orthodontist. This evaluation implies that the basis of Prof. Türp's analysis, which he also published in *Deutsche Zahnärztliche Zeitschrift*, is questionable. Türp's analysis of 30 "randomly" selected websites shows a completely different picture:

   - In 50 per cent of the cases, prosthetic measures were mentioned as a follow-up treatment to splinting therapy.
   - Orthodontic treatment was mentioned in one third of the cases after the first phase of splint treatment and was often described as therapeutically useful in conjunction with prosthetic reconstructions. This makes a total of 80 per cent prosthetic follow-up procedures.

So this is the basis for suspecting his colleagues of using treatment methods that harm their patients in order to enrich themselves? What prompted this article? Türp writes that he was asked at an expert

conference to comment on the above strategy and the problems associated with this therapy.

Quote Prof. Türp:

"The aim of this article is therefore to fill the existing gap. In doing so, many text excerpts from original papers are deliberately reproduced verbatim—something that is otherwise rather unusual in articles—because, particularly for reviewers who have to prepare expert reports for insurance or court cases, such quotations are usually more helpful than paraphrased descriptions." This means: On the basis of these misrepresentations, expert reports may be written, followed by legal proceedings which, depending on the outcome, may deny patients necessary treatment and thus impair their health!

The 4/2023 issue of the *JCMF* contains a letter to the editor by Prof. Ralf J. Radlanski, which is well worth reading, as he comments from the perspective of both the treating physician and the scientist. The response of Professors Türp and Greene published in the same issue provides a deep insight into the mindset of the two gentlemen. (Jens C. Türp's and Charles S. Greene's reply to Prof. Ralf J. Radlanski's letter to the editor. JCMF. 2023; 15(4): 351–60.)

Quote Prof. Türp:

"Science thrives on the exchange of opinions; traditionally, this also includes academic disputes."

Prof. Türp is absolutely right. However, an exchange of opinions does not include portraying colleagues as deliberately treating patients with harmful therapies for financial reasons, based on a survey that appears to be more than dubious.

Now follows an explanation from Türp as to why all the excitement arose after his article was published.

Quote Prof. Türp:

"[...] that it was first written in English and then translated into German, [...] in the German translation, we had not considered that the German term "kraniomandibuläre Dysfunktion" (craniomandibular dysfunction; CMD [...] is not identical to the English term. "TMD" corresponds in German to the term "Myoarthropathie" ("myoarthropathy"; MAP) [...] therefore, functionally interfering premature tooth contacts and occlusal interferences, as well as desmodontal pain, were not the subject of our consideration. However, this should have been clear to the attentive reader of our article [...]

Holy science! Those stupid dentists have once again failed to understand anything! I would like to emphasise another point: Türp wrote in the article that he wanted to help court or insurance experts in particular with these quotations. On page 358 of his reply to Prof. Radlanski's letter to the editor, however, he tries to explain at length that this was not his intention. At the same time, however, he states that it is inevitable that his article will be misinterpreted or even misused by patients or payers and lawyers to discredit indicated total dental restorations. This statement alone makes it necessary for the DGFDT to provide clarification to insurance companies and experts. On the last page of his reply, Türp again cannot resist claiming that dentists deliberately provide expensive therapies that are detrimental to their patients in order to enrich themselves!

The diagnosis and treatment of occlusal disorders and the establishment of functionally adequate prosthetic rehabilitations require not only a high level of scientific knowledge of the functions of the masticatory organ, but also a high degree of dexterity and manual skill in the treatment of patients.

One background may be the establishment of orofacial pain specialists in the USA who, based on their psychosocial models, treat as many TMDs as possible with their standard procedures (with medication, splints and psychiatrists). There is a lot of money at stake. Greene and Manfredini claim that any successful occlusal treatment is based only on chance or on a placebo effect and therefore all occlusal CMD treatment should be regarded overtreatment. Articles like this appear almost every month.

They are all opinionated statements based on no or very weak scientific evidence.

What does the reality look like?

- Phase 1/phase 2 therapy as described by Türp is not a known entity.
- The indication for comprehensive prosthetic rehabilitation is rarely based on a diagnosis of CMD.
- Of course, many comprehensive rehabilitations—based on other indications—require functional pretreatment.
- Once CMD treatment has been successfully completed, most patients continue to use their splints and return to the practice for regular check-ups, i.e. there is no comprehensive prosthetic rehabilitation unless there are important diagnoses derived from other specialities.

Dr med. dent. Diether Reusch

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