Dear Editor,

Over the past few years at our annual American Academy of Implant Dentistry meetings, I have witnessed many beautiful implant reconstructions, only to have the presenters conclude with, “And of course, we designed our prosthesis to ensure implant-protected occlusion.” Such prophecies are derived from the concept of mutually protected articulation (MPA)—an occlusal scheme in which the anterior teeth disengage the posterior teeth in all mandibular excursive movements, and the posterior teeth prevent excessive contact of the anterior teeth in maximum intercuspation. Unfortunately, this may not be true.

I question the credibility of MPA simply because it is illogical. This is old dogma based on incorrect reasoning, so relying on these fallacious assumptions jeopardizes the longevity of any implant reconstruction.

The first question to ask is, “Protection from what?” Certainly not from the normal/natural functions of the stomatognathic system, such as talking, eating, and swallowing (which range from 40 to 60 lb/in²), but instead proposed protection from the parafunctional compressions of clenching and/or grinding of one’s teeth. These functions create pressure that ranges from 400 to 600 lb/in². The entire definition of MPA describes a state of protectionism from clenching and/or grinding, yet it does not say that. When the definition says that the posterior teeth, in intercuspation, protect the anterior teeth, it does not describe why the posterior teeth are in a position of intercuspation. Is it because they are in a normal swallowing closure (60 lb) or are they in a clench mode (600 lb)? In addition, MPA does not consider damage to the posterior teeth and alveolar bone while clenching. Further, what if the patient’s parafunctional habit is to not clench in MIP, but instead to clench their anterior teeth? Now what?

When the definition of MPA states that the anterior teeth disengage the posterior teeth in all mandibular excursive movements, again, the definition does not state the reason for the excursions. Is it because the mandible is going into a nonharmful exercise or is the patient grinding his or her teeth? What about damage to the anterior teeth or implants if the patient is grinding during this pathologic exercise?

The concept of MPA is not logical and it is harmful. It does not address patients who have Class II and III jaw relationships. It also imparts a false sense of security for Class I relationships. If protection from parafunction is the objective, it is not provided by directing untoward forces to designated teeth to bear harmful loading; instead, it is obtained by preventive measures.

The confusion regarding occlusion has been a major distraction, removing the primary focus from the far more serious problem of clenching and/or grinding. However, this remains a highly avoidable situation. Protection from parafunction is obtained by three easy steps:

1. Tell the patient everything you know about clenching and grinding. If the problem is clenching during waking hours, it remains the patient’s responsibility to self-monitor and control it. Anterior guards should not be worn during waking hours. Soft guards may encourage clenching. Patients need to adopt that old adage, “Lips together; teeth apart.”

2. Design implant prostheses so vertical loading is ensured upon closure. Occlusal contacts should be confined to the tips of the functional cusps. Incline planes should not touch. The patient’s remaining teeth should be evaluated to determine whether an equilibration might be beneficial. Patients should be discouraged from going into lateral excursions.

3. If the patient is grinding and/or clenching while sleeping, a guard is warranted.

For additional information on occlusion, see McCoy.¹

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REFERENCE


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