Dental occlusion/temporomandibular joint and general body health

Drs Yong-Keun Lee & Hyung-Joo Moon discuss clinical evidence and mechanism of an underestimated relationship

**Correlation between trigger points and acupuncture points**

Although separated by two millennia, the traditions of acupuncture and myofascial pain therapies share fundamental similarities in the treatment of pain disorders. Recent reports have suggested substantial anatomic, clinical and physiological overlap of the myofascial trigger points and acupuncture points. The analogy between the trigger points and acupuncture points has been discussed since 1977, when 300 per cent anatomic and 71 per cent clinical pain correspondences for the myofascial trigger points and acupuncture points in the treatment of pain disorders were reported.

A number of similarities between them were also suggested. The two structures have similar locations and needles are used at either point to treat pain. The pain associated with the local twitch response at trigger points is similar to the de qi sensation, and the referred pain generated by needling trigger points is similar to the propagated sensation in the limbs.

It was pointed out, however, that the acupuncture points located at the trigger points are not frequently used by acupuncturists, and do not share the same clinical indications as the trigger point therapy. It was further argued that the claim of 71 per cent correspondence between the acupuncture points and the trigger points is conceptually impossible. Furthermore, even putting this conceptual problem aside, no more than 40 per cent of the acupuncture points correspond to the treatment for pain and, more likely, only approximately 18 to 19 per cent of the points are actually correlated. The correlation between the trigger points and the acupuncture points clearly need to be further investigated in the future.

The fascial connection theory we propose can explain the functional connection between dental occlusion (TMJ) and other parts of the body based on either myofascial release or the qi and meridian system, or a combination of both. Therefore, dental occlusion should be built up and maintained in a natural condition, while causes for deterioration of the TMJ status should be treated in an effort to restore the natural condition.

**Mechanism based on qi and the meridian aspect**

The second hypothesis is that the TMJ and other parts of the body are connect ed through the meridian system, which is constituted of the fasciae. Traditionally, acupuncture meridians are believed to form a network throughout the body, connecting peripheral tissues to each other. Studies that seek to understand the acupuncture point/meridian systems from a Western perspective have mainly focused on identifying distinct histological features that differentiate acupuncture points from surrounding tissue. One of the biological and anatomical associations with the meridians is intermuscular or intra-muscular loose connective tissue (fascia). Ancient acupuncture texts contain several references to “fat, greasy membranes, fasciae and systems of connecting membranes” through which the qi is believed to flow. In terms of connective tissue associations, several authors have suggested that in acupuncture meridians, points which tend to be located along the fascial planes between muscles or between a muscle and bone or tendon, and the connective tissue is thickened with fibrous tissue. In view of experimental evidence, it has been hypothesised that the network of the meridians can be viewed as a representation of a network of interstitial connective tissue. These findings are supported by ultrasound images showing connective tissue cleavage planes at the acupuncture points in human beings. Rather than viewing acupuncture points as acupuncture meridians, it has been proposed that these points might correspond to sites of convergence in a network of connective tissue permeating the entire body, similar to highway intersections in a network of primary and secondary roads.