



Temporomandibular joint injection therapy

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The etiology of temporomandibular disorder (TMD) is diverse, involving multifactorial etiological factors. Thus, most cases are not resolved with just one type of treatment. Dentists treating TMD must be familiar with various treatments. Additionally, there are numerous pathogeneses of TMD. If overload is applied to the temporomandibular joint (TMJ), lesions may occur on the synovial membrane inside the joint, or the position of the disc may change. There are many cases where the shape of the disc is deformed or the surrounding tendons, ligaments, and muscles are damaged, preventing the TMJ from performing its normal function. When overload is applied to the masticatory muscles around the TMJ, muscle spasm and myositis occur, causing pain and dysfunction. Because these muscles are directly or indirectly connected to other muscles in the head, face, and neck, they can cause headaches, facial pain, neck pain, and shoulder pain.

The principle of treatment for TMD is accurate diagnosis and a variety of reversible treatments. In other words, a good treatment effect can be achieved by applying counseling and medication, physical therapy, oral appliance therapy, TMJ prolotherapy, injection therapy, TMJ arthrocentesis, and TMJ arthroscopy in combination. Irreversible treatments such as open TMJ surgery, orthodontic treatment, and full mouth rehabilitation are treatments of last resort and should be chosen carefully.

One of the principles of TMD treatment is to prioritize the patient's chief complaint. In other words, jaw dysfunction such as pain and restricted mouth opening must be resolved

as a top priority. Although injection therapy is very useful to achieve this goal, dentists who treat TMD are often reluctant to use it. Among all medical professionals, dentists have the most experience with injection therapy due to routine use of intraoral inferior alveolar nerve blocks. Relative to those, injections of the face and neck are easy and involve few complications because the anatomic landmarks are clear. Injection therapies performed to treat TMD include TMJ injection (corticosteroid, hyaluronic acid, lidocaine), SNEPI (sympathetic nerve entrapment point injection), TTPI (tendon traction point injection), trigger point injection, botulinum toxin injection, prolotherapy, TMJ pumping, and TMJ arthrocentesis¹⁻⁶. If injection therapy is appropriately performed when indicated and combined with other treatments, TMD can be treated easily and result in patient satisfaction.

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Conflict of Interest

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

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