mandibular movement can enhance joint lubrication and nutrition by encouraging the production of physiological quality and quantity of synovial fluid and minimizing the accumulation of metabolic by-products and pain mediating substances.

Identification of the source(s) of stress and the importance of the patient understanding the association and adverse influence of stress and the course of TMD are also vital. Clinical and health psychology participation in your multidisciplinary approach may be required to enhance your treatment outcome.

Pharmacotherapy

Rational utilization of pharmacological agents can be a valuable adjunct in the treatment of TMD. Drugs must be considered on a case-specific basis. A clinician must remember that the treatment of TMD cannot rely on a single drug for all cases. Understanding the variety of drugs utilized in the treatment of musculoskeletal conditions, their potential drug interactions and their side effects can result in a useful tool in our armamentarium.

The most effective pharmacological agents for the management of TMD include analgesics, non-steroidal anti-inflammatory drugs (NSAIDs), corticosteroids, anxiolytics, muscle relaxants and antidepressants at very low dosages.14,15

Non-steroidal anti-inflammatory drugs

This category is effective for the management of mild to moderate pain and inflammatory conditions, particularly those of muscle origin. Relief of symptoms is typically achieved prior to the anti-inflammatory effect. In order to obtain anti-inflammatory effects, these medications should be taken for a minimum of two weeks following the recommended schedule. NSAIDs differ in formulation, efficacy and toxicity. It is suggested that if one NSAID fails, another agent should be considered. Common side effects to be considered include gastric distress, inhibition of platelet aggregation, tinnitus/dizziness, and renal/liver toxicity. A list of the most commonly utilized drugs is found in Table 1.

Steroids

Corticosteroids are typically indicated in cases of non-infectious inflammation when NSAIDs have proven to be ineffective. Systemic corticosteroids are not commonly prescribed in the treatment of TMD due to their side effects. They could be considered when in association with the polyarthrides. Intra-articular temporomandibular injection of corticosteroids has been considered on a selective and limited basis in cases of severe joint pain or in cases of flare ups where conservative therapy has failed.6,17 We must recognize that multiple intra-articular steroid injections may have detrimental effects. These medications are also effective in the treatment of inflammatory conditions such as tendinitis or tendonitis where, due to the decreased flow to the areas, oral medications will provide less than desirable results. Side effects include decreased resistance to infection, fluid retention weight include drowsiness and nausea. Benzodiazepines are contraindicated in patients with narrow-angle glaucoma, and can increase CNS depression. A list of anxiolytic agents typically utilized in TMD, sleep disturbances to include insomnia, and the quality and quantity of sleep. Its combination with an NSAID can be a very effective regimen for a variety of local anesthetics. Diazepam, a benzodiazepine, is also used as a muscle relaxant. A list of commonly used muscle relaxants is shown in Table 4.

Anxiolytics

These medications are helpful with chronic diffuse pain due to myofascial pain, especially when it has been recognized that sleep disturbance is a contributing factor. The analgesic properties of the tri-cyclic antidepressants are independent of the antidepressant effect. They have shown pain modification properties at therapeutic dosages much lower than those prescribed for antidepressant effect. The therapeutic effect of the drugs is thought to be related to their ability to increase the availability of the neurotransmitters serotonin and norepinephrine at the synaptic junction in the central nervous system. Studies have shown that these medications alleviate also in the treatment of sleep related bruxism, tension type headache, migraine headache prophylaxis, fibromyalgia and various neuropathic conditions.21,22

Side effects are mainly related to the anticholinergic activity that induces xerostomia, dryness of mucous membranes, urinary retention, dry mouth, constipation, and nausea. These medications are helpful in the management of pain and inflammatory conditions.21,22

Typical indications for opioids in the TMD population include exacerbation of pain, postoperatively and in cases of overt trauma. These medications are best indicated for moderate to severe pain over a short period of time. Most common side effects are nausea, respiratory depression and physical dependence. Opioids may be considered in cases of pain refractory for appropriately integrated multi-disciplinary care when properly monitored.

Local anesthetics can be useful in the TMD population as a diagnostic tool and also in selective cases as a therapeutic modality. Indications are as a diagnostic block and in the management of myofascial trigger points. Injections into skeletal muscle with local anesthetics that contain a vasconstrictor can increase the toxicity of the solution. Typically, lidocaine or carbocaine without a vasconstrictor is recommended, especially when injected into muscle (to minimize myotoxic effects). Diagnostic anesthesia may be as simple as the usage of a topical agent, somatic blocks (filtration, field blocks and division blocks), trigger points injections,