

Current thinking in the examination and management of the TMJ

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The majority of patients encountered in primary care with TMJ dysfunction can be treated conservatively with advice and reassurance. In the author's practice, only around ten per cent of patients referred to secondary care undergo a surgical procedure to treat TMJ problems.

A recent (as yet unpublished) survey undertaken by the author of recently qualified GDPs illustrated that the procedures that are undertaken by oral and maxillofacial surgeons with a special interest in TMJ are not well known. Approximately fifty per cent of respondents did not know alloplastic TMJ replacement exists and is an option for degenerative arthritis.

The normal joint

GDPs must distinguish between those patients who have functional disturbances and those who do not. Patients who have a 'normal joint' may present with pain specifically centered around the TMJ but report no history of dislocation, locking, difficulty chewing or trismus. The patients exhibit full range of jaw movements, with no deviation on opening and no audible joint noises. The patient may have sustained some acute trauma such as whiplash, assault, a fall or an otalgic infection. In chronic TMJ pain cases with normal function, arthralgic pain may be secondary to myofascial pain, fibromyalgia or part of a neuralgic condition.

Presentation

- TMJ pain
- Absence of joint sounds
- Absence of locking and dislocation
- No restriction of jaw movement
- No difficulty in chewing

Consider

- Joint contusion – acute trauma such as assault, whiplash, or a fall
- Ear pathology



- Myofascial pain
- Neuralgic/neuropathic conditions
- Psychological conditions

Surgery has no role in these cases. Treatment is medical, in addition to or in place of splint therapy. Common aetiologies of TMJ dysfunction include:

- Trauma
- Osteoarthritis
- Rheumatoid arthritis
- Ankylosing spondylitis
- Seronegative spondyloarthropathies
- Parafunctional habits
- Hypermobility
- Orthognathic surgery

GDPs should know the potential causes of TMJ dysfunction and it is important to bear these in mind when assessing a TMJ patient.

Current thinking in conservative management relevant to GDPs

- The injured joint needs rest. Retrusive exercises are commonly prescribed and are useful in some situations of internal derangement and restriction of opening, However, an inflamed joint normally needs rest
- Cochrane assessment shows no evidence for occlusal adjustment in TMJ treatment¹
- Systematic review and prospective studies show no evidence that orthodontic treatment is a cause for TMJ dysfunction^{2,3}
- Cochrane review shows a lack of evidence that orthodontics is a treatment for TMJ dysfunction⁴
- NSAIDs are the medication of choice in TMJ dysfunction. BMJ analyses have shown topical NSAIDs are just

as effective as systemic,^{5,6} so this is advised first. In addition, massage appears to be effective as well. Four times a day for four weeks is recommended initially⁷

- Cochrane analyses also show that no bite splint is significantly better than any other.⁸ A simple lower soft bite raising splint is recommended to alter the mandibular rest position and 're-programme the muscles'

GDPs are encouraged to treat their patients conservatively using the above measures for at least three to six months prior to referral to secondary care.

The abnormal joint

This covers a wide spectrum of clinical symptoms, and with these, different treatment modalities. Patients' symptoms may range from intermittent joint pain to intractable pain, and from occasional locking to constant crepitus. Persistent 'closed lock' symptoms with the inability to chew anything solid, malocclusion

from joint collapse (which may happen in rheumatoid arthritis), and painful joint clicking may also be reported.

Diagnoses in these categories ranges from early TMJ internal derangement (an abnormally positioned disc) to advanced derangement, condylar fractures, severe TMJ osteoarthritis, ankylosis or even TMJ tumours in the rare cases.

Surgery has a role in these cases. Treatment ranges from simple blind arthrocentesis to alloplastic TMJ replacement.

Surgical treatments include:

- 1 Blind arthrocentesis
- 2 Arthroscopic lysis and lavage
- 3 Disc plication/disc repositioning procedures
- 4 Eminoplasty/eminectomy
- 5 Condylar arthroplasty/condylar shave
- 6 Discectomy/meniscectomy
- 7 Condylar neck osteotomy
- 8 TMJ replacement

Usually the first two procedures are employed prior to 'open joint surgery', as a number of patients are 'cured' through these minimally invasive procedures. This is especially true in patients with 'acute closed lock' or 'anchored disc phenomenon.' Indeed, Nitzan DW et al⁹ suggest they should be considered as the first line of treatment for those presenting with acute, severe restriction in mouth opening.

Please note that disc repositioning surgery has fallen out of favour, particularly where restriction in mouth opening, pain and joint sounds are not marked. There have been numerous studies that show disc position does not influence patient satisfaction following intervention. Instead, it is speculated that restricted gliding movement of the mandibular condyle over the articular eminence may be due to reversible adhesion of the disk to the glenoid fossa, caused by a vacuum effect or alteration in synovial fluid¹⁰

The option of open joint procedures is of course explored if minimally invasive procedures are unsuccessful, for instance in the treatment of degenerative disease.

Summary of current thinking in TMJ dysfunction

- 1 Distinguish between functional and non-functional TMJ problems
- 2 Remember the aetiologies of TMJ dysfunction
- 3 There is no evidence for orthodontics being an aetiology in TMJ dysfunction, and insufficient evidence that it aids treatment currently
- 4 There is no evidence for occlusal modification or complex bite splints
- 5 Treat patients conservatively for 3-6 months prior to referral to secondary care in the majority of cases.
- 6 Be aware of the surgical procedures available to treat complex TMJ dysfunction.

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