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Short communication

Guidelines for the replacement of temporomandibular joints in the United Kingdom

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Abstract

BAOMS has requested that guidelines be formulated for the replacement of the temporomandibular joint (TMJ). This is an expensive and technique sensitive method of TMJ reconstruction and in the current climate warrants an agreed approach. The following document states the indications and contraindications for this technique as discussed and agreed amongst surgeons currently carrying out this procedure in the UK.
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Keywords: Temporomandibular joint (TMJ); Total joint replacement; Hemi-arthroplasty; Prosthetic joint replacement; Alloplastic joint replacement

Prosthetic replacement of a temporomandibular joint is expensive, and dependent on technique for its success. Previous prostheses, notably the Vitek-Kent 1, have shown that there may be serious consequences if the technique is regarded as a panacea for all conditions of the TMJ. There has been a resurgence in its use in the United States, and subsequently in the UK, in recent years for specific patients. Our association requested that those surgeons who are currently using this form of surgery should liaise and formulate some guidelines for its use. Here we give the guidelines agreed by all the contributors.

Indications for total replacement of the temporomanibular joint

The indications are more stringent than those for an orthopaedic total joint replacement.

Prerequisite: Failed conservative management (including arthroscopy if possible).
Diagnosis: Computed tomogram or magnetic resonance scan as a minimum (not just plain radiographs).

Diseases involving condylar bone loss

Degenerative joint disease (osteoarthrosis)
Inflammatory joint disease (e.g. rheumatoid, ankylosing spondylitis, psoriatic)
Ankylosis
Post-traumatic condylar loss or damage
Postoperative condylar loss (including neoplastic ablation)
Previous prosthetic reconstruction
Previous costochondral graft
Serious congenital deformity
Multiple previous procedures

Indications (usually a combination of the following)

Dietary score of <5/10 (liquid scores 0, full diet scores 10)
Restricted mouth opening (<35 mm)

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Occlusal collapse (anterior open bite or retrusion)

Excessive condylar resorption and loss of height of vertical ramus

Pain score >5 out of 10 on visual analogue scale (combined with any of the others)

Other quality of life issues

These give an idea of pain and functional disability, and permit some assessment of outcome.

Contraindications

Local infective process

Severe immunocompromise

Severe coexistent diseases (American Society of Anesthesiologists Grade III)

Surgical indications for hemiarthroplasty of the temporomandibular joint (fossa-eminence prosthesis)

Indications

Painful or dysfunctional internal derangements after failed conservative and surgical treatment, and a healthy condyle on computed tomogram or magnetic resonance scan.

Associated quality of life issues as with total prosthetic replacement.

Contraindications

Disruption of the condylar surface

Avascular necrosis

Presence of osteophytes

Conclusion

Although these guidelines are not all-inclusive they provide guidance for referral of patients for assessment for this procedure by a suitably trained and qualified surgeon. They should be revised as new developments occur and audit of the outcomes of the prostheses continue. A national database is currently in production for analysis of outcomes.