

TOTAL JOINT REPLACEMENT (TJR) FOR UNILATERAL TEMPOROMANDIBULAR JOINT ANKYLOSIS: A CASE REPORT

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INTRODUCTION

Temporomandibular joint (TMJ) ankylosis is a pathological condition characterized by articular bony or fibrous tissue fusion. TMJ ankylosis is most commonly linked to trauma (13-100%), infection (10-49%), and systemic diseases like ankylosing spondylitis, rheumatoid arthritis and psoriasis (10%)¹. TMJ ankylosis occurring during childhood can lead to mandibular growth complications eventually. Hard and soft autogenous tissue grafting has been used for TMJ reconstruction after surgical gap arthroplasty. However, in cases where autogenous tissue grafts fail either due to unpredictable growth or reankylosis, total alloplastic temporomandibular joint replacement (TMJ TJR) can provide a viable option. This case reports a patient with reankylosis which was successfully managed with TJR.

CASE DESCRIPTION

An 18 year old male patient presented to Department of Oral and Maxillofacial surgery with a chief complaint of inability to open his mouth since 10yrs hence had difficulty in chewing. Patient was diagnosed with Beta Thalassemia minor during his pre anesthetic assessment. Patient gave no past history of trauma or any other relevant medical history.

Patient gave a history of ankylosis release done when he was 8 years old with gap arthroplasty. On clinical examination patient had reduced mouth opening (approximately 2 mm) **Figure 1**, deviation of the jaw was seen towards left side on opening and facial asymmetry.

He was operated for the same with total replacement of the temporomandibular joint with a pre-fabricated stockbiomet implant(**Figure 2**). The immediate post operative mouth opening was 10mm and after 1month of active physiotherapy 32mm was achieved(**Figure 3**). A regular follow-up was done and patient exhibited satisfactory functional results.



Fig 1: Preop mouth opening



Fig 2: Post op mouth opening



Fig 3: Post Op radiograph after Temporomandibular Joint Reconstruction

DISCUSSION

TMJ ankylosis is relatively common in developing countries mainly resulting from childhood trauma².Surgical procedures for the treatment of the ankylosed condyle can be broadly classified into three groups: condylectomy, gap arthroplasty, and interpositional arthroplasty. Numerous materials have been used to reconstruct the TMJ including autogenous, alloplastic and xenogenic bovine bone grafts.Modern-day approaches to TMJ reconstruction include a handful of surgical modalities: costochondral grafting, revascularized tissue transfer, distraction osteogenesis, and alloplastic temporomandibular joint replacement (TJR). Over the past several years, publications have focused primarily on distraction osteogenesis and

TJR. In particular, TJR is emerging as a highly successful and versatile surgical modality when faced with TMJ defects³.

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