

Comparison of Conventional 45° and Modified 90° Fascial Incisions in the Al-Kayat Bramley Approach: A Prospective Evaluation of Facial Nerve Injury

Dr. Geeta Singh

Professor, Department of Oral & Maxillofacial Surgery, King George's Medical University, Lucknow, Uttar Pradesh, India

Dr. Bhavna

Department of Oral & Maxillofacial Surgery, King George's Medical University, Lucknow, Uttar Pradesh, India

Abstract:

Introduction: The facial nerve, often referred to as the "Queen of the Face," innervates the muscles of facial expression and is vulnerable during temporomandibular joint (TMJ) surgery. The Al-Kayat and Bramley modified preauricular approach was designed to protect the temporal and zygomatic branches through a 45° incision in the superficial temporalis fascia. However, postoperative involvement of these branches continues to be reported. This study aimed to evaluate whether a modified 90° fascial incision could further reduce facial nerve injury compared with the conventional 45° incision.

Methods: A prospective study was conducted in the Department of Oral and Maxillofacial Surgery, King George's Medical University, Lucknow. Thirty-four patients requiring TMJ or related surgical procedures were operated on by the same surgical team using either the Al-Kayat Bramley or hemi-coronal approach. Patients were randomly divided into two groups: Group 1 underwent the conventional 45° fascial incision, while Group 2 underwent the modified 90° fascial incision. Facial nerve function was assessed postoperatively at regular intervals using the House–Brackmann Facial Nerve Grading System.

Results: The incidence of temporal and zygomatic branch injuries was lower in patients treated with the modified 90° incision compared with those who underwent the conventional 45° incision. All observed facial nerve deficits were temporary and showed progressive recovery during follow-up.

Conclusion: Facial nerve dysfunction following TMJ surgery was transient in nature. The modified 90° fascial incision demonstrated a lower incidence of postoperative temporal and zygomatic branch injury compared with the conventional 45° incision, suggesting that it may be a safer modification of the Al-Kayat Bramley approach for minimizing facial nerve morbidity.

Keywords:

Al-Kayat Bramley approach, nerve injury, temporalis fascia.