

## University of Western Ontario

### **MANDIBULAR SECOND MOLAR EXTRACTION, MANDIBULAR PREMOLAR EXTRACTION, AND NON-EXTRACTION TREATMENT IN THE ORTHODONTIC CAMOUFLAGE OF SKELETAL CLASS III PATIENTS**

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**Introduction:** This study was a comparison of treatment effects in the orthodontic camouflage of skeletal Class III malocclusions.

**Methods:** Subjects were divided into three groups based on treatment modality: extraction of mandibular second molars (n=24), extraction of premolars (n=33), and non-extraction treatment (n=44). A retrospective analysis of lateral cephalometric radiographs revealed significant differences among the groups for changes in dental and soft tissue measures from pre-treatment to post-treatment.

**Results:** In mandibular premolar extraction treatment, the largest changes were seen in lower incisor retroclination, lower lip retrusion, and increase in overjet. Mandibular second molar extraction resulted in the largest increase in overbite, flattening of the occlusal plane, and distal crown tipping of the first molar. Non-extraction treatment was successful but changes were to a lesser degree than in the other groups. Mandibular third molars erupted successfully in the majority of second molar extraction cases.

**Conclusions:** From this study we may conclude that all three treatments can achieve a satisfactory outcome if patients are selected appropriately. Mandibular second molar extraction in the camouflage of skeletal Class III malocclusion can be successful for patients who present with mild to moderate crowding in the lower arch, minimal overbite, steep occlusal plane angulation, mesially tipped mandibular posterior teeth and well-positioned mandibular third molars.