

Case Report Update

“A case of unilateral mandibular condylar osteochondroma treated with ipsilateral condylectomy and contralateral ramus osteotomy” (published in AJODO 2016;149:740-750)

Case description

Mandibular condylar osteochondroma is unilateral benign pathologic condition, with progressive proliferation of cartilaginous tissues in the condylar head.^{1,2} If not complete resection of the tumor, the tumor continues to grow, causing malocclusion and jaw deformity to recur.¹ As the result, a low condylectomy procedure is a suitable option for the treatment of mandibular condylar osteochondroma and associated jaw deformity. We successfully treated a case of facial asymmetry involved in unilateral mandibular condylar osteochondroma with ipsilateral low condylectomy and contralateral ramus osteotomy. A female patient, 32-year 11-month of age, had a chief complaint of facial asymmetry which initiated about 10 years ago. She was diagnosed as facial asymmetry with a skeletal Class III jaw-base relationship caused by unilateral mandibular condylar osteochondroma. After 18 months of preoperative orthodontic treatment, ipsilateral condylectomy and contralateral sagittal split ramus osteotomy were performed. As the results of postoperative orthodontic treatment for 20 months, an ideal occlusion having a Class I molar relationship with an adequate interincisal relationship was achieved. Facial asymmetry and mandibular protrusion were dramatically improved. The acceptable occlusion and symmetric face were maintained throughout 1-year retention period. Afterwards we instructed her to continue to use a tooth positioner only at night, and requested her to visit our clinic once six months to follow-up.

At 2-year and 4-month postretention, acceptable occlusion was maintained with overall facial balance. Cephalometric analysis revealed no or less changes in all skeletal measurements. At 3-year 1-month postretention, since lingually bonded retainer in maxillary anterior teeth was broken, we instructed her use of a tooth positioner every night. At 5-year and 10-month postretention, the patient had no masticatory disturbance and functional problems. Overall facial balance was maintained well, and no recurrence of facial asymmetry was observed (Figure 1). Overbite was reduced to + 1.0 mm causing a slight clockwise mandibular rotation; however, stable molar intercuspation was maintained with a proper anterior guidance. From clinical examination, the movement of mandibular incisal point shifted to the left during mouth opening, and the midline of mandibular central incisors shifted 6.0 mm to the left at the maximum mouth opening. From cephalometric analysis, a skeletal Class I jaw-base relationship was well maintained and minimal or no changes in maxillary and mandibular skeletal patterns were observed except 0.5° clockwise mandibular rotation.

Several researchers reported the stability of orthognathic surgery in the treatment of unilateral condylar osteochondroma, and demonstrated that most patients with mandibular condylar osteochondroma who underwent low condylectomy and orthognathic surgery revealed a stable occlusal outcome without relapse and an improvement in subjective symptoms at least 2-year postretention, while the condyle undergoes gradual adaptive remodeling.³⁻⁷ Our patient also maintained an acceptable and stable occlusion at 5-year and 10-month postretention; however, panoramic radiograph revealed minor change in condylar shape which may be caused by bone remodeling and/or resorption. Conclusively, our results indicated the necessity of long-term monitor in this patient underwent unilateral condylectomy, especially because of the persistent condylar remodeling.

References

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Figure legend

Figure 1. Five years and 10 months retention facial and intraoral photographs.



Figure 1