

Oral Presentations: 1 - Dentofacial deformities

# OP7 TEMPOROMANDIBULAR JOINT SYMPTOMS BEFORE AND AFTER ORTHOGNATHIC SURGERY

U Garagiola, E del Rosso, G Farronato, Department of Biomedical, Surgical, Dental Sciences and Orthodontics, IRCCS Fondazione Ospedale Maggiore Policlinico, University of Milan, Italy abstract ID 7

**AIM:** To evaluate temporomandibular joint (TMJ) symptoms and functional and neuromuscular changes after surgical-orthodontic treatment of orofacial deformities with temporomandibular dysfunction (TMD).

**SUBJECTS AND METHOD:** Four hundred and twenty orthognathic patients their skeletal and dental malocclusion type, TMJ symptoms, headache, cervical and neck pain, otovestibular symptoms were evaluated. Electromyography and kinesiography were used to assess muscular activity and mandibular movements.

RESULTS: TMJ symptoms in low and normal angle mandibular retrognathic patients improved (P

**CONCLUSION:** Combined surgical-orthodontic treatment may be of a great benefit for correction of discrepancies of the occlusion and maxillo-mandibular relationships, particularly in patients with TMD. Conversely orthognathic surgery can produce TMJ symptoms by changing the position of the mandible and the maxilla and thus the position of the condyle in the glenoid fossa. Mandibular ramus osteotomies have a direct influence on this position, whilst in maxillary osteotomies the influence is indirect because of autorotation.



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#### OP7 TEMPOROMANDIBULAR JOINT SYMPTOMS BEFORE AND AFTER **ORTHOGNATHIC SURGERY**

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SUBJECTS AND METHOD: Four hundred and twenty orthognathic patients their skeletal and dental malocclusion type, TMJ symptoms, headache, cervical and neck pain, otovestibular symptoms were evaluated. Electromyography and kinesiography were used to assess muscular activity and mandibular movements.

RESULTS: TMJ symptoms in low and normal angle mandibular retrognathic patients improved (P < 0.01). Almost all craniomandibular symptoms were significantly reduced post-operatively; above all muscular spasms (96%) and headache (61%), (P < 0.01); mandibular kinesology (81%) was improved (P < 0.01). Cervical pain, otovestibular and postural symptoms also seemed to improve after surgery. Post-operative TMD occurred in 8.8 per cent of patients even if they were previously asymptomatic (P < 0.1). A new occurrence of TMD was highest for high angle patients with severe mandibular retrognathism, treated by bimaxillary surgery.

CONCLUSION: Combined surgical-orthodontic treatment may be of a great benefit for correction of discrepancies of the occlusion and maxillo-mandibular relationships, particularly in patients with TMD. Conversely orthognathic surgery can produce TMJ symptoms by changing the position of the mandible and the maxilla and thus the position of the condyle in the glenoid fossa. Mandibular ramus osteotomies have a direct influence on this position, whilst in maxillary osteotomies the influence is indirect because of autorotation.

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