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ARE SKELETAL AND DENTAL CHARACTERISTICS, AS WELL AS CERTAIN ASPECTS OF TREATMENT, RELATED TO BONY CONDYLAR CHANGES?

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Introduction: Degenerative joint disease is mildly prevalent in a pre-orthodontic population and can contribute to jaw pain and skeletal relapse post-orthodontic treatment.

Purpose: To determine whether craniofacial form or particular treatment modalities are related to TMJ condylar degeneration.

Materials and Methods: The cephalometric radiographs of 61 subjects with moderate-severe condylar degeneration (as diagnosed from panoramic radiographs) were traced and treatment factors were recorded.

Results: Cephalometric findings of significance in this study included increased facial convexity, increased ANB, decreased SNB, decreased Pg-NA perpendicular, increased mandibular plane angle, increased gonial angle, increased overjet, and upright lower incisors when compared to cephalometric standards. Treatment modalities of significant prevalence are orthognathic surgery and Class II or CI III elastics.

Conclusions: Results from this study are inconclusive without a control group but the following observations can be made:

1. The prevalence of moderate to severe TMJ condylar degeneration, in a pre-orthodontic population was 3.02%
2. Subjects with moderate to severe TMJ condylar degeneration demonstrated:
 - a. Mandibular retrognathia
 - b. Upright mandibular incisors
 - c. Dolichofacial pattern and vertical growth pattern
3. Females are at higher risks for developing TMJ condylar changes than males
4. Subjects requiring orthognathic surgery may be at risk fro developing TMJ condylar changes
5. The use of Class II or III elastics may increase the risk of developing TMJ condylar changes

