Considerations of maxillomandibular transverse discrepancies in orthodontic treatment

Transverse discrepancy is generally diagnosed upon intraoral examination by the presence of a posterior crossbite. The etiology of this malocclusion is multifactorial and is associated with hereditary or environmental factors such as skeletal, dental or congenital abnormalities, nonnutritive sucking habits, mouth breathing, etc. Posterior crossbites remaining into adulthood could pose a risk for continuous periodontal damage, unstable occlusion and even facial asymmetry. It is not uncommon to encounter individuals with increased vertical dimensions with relatively narrower upper dental arch and posterior teeth either compensated or in a crossbite state. In addition, class-2 and 3 patients frequently show transverse dental discrepancies which further complicate orthodontic treatment. However, most of these clinical findings have been studied by posteroanterior radiographs which may inevitably include magnification errors because of its 2-dimensional nature. This presentation will show evaluations of dental arch dimensions and tooth inclinations of the molar area using 3-dimensional CBCT images in adults with different vertical and sagittal facial types. Vertical dimensions will be categorized as high, normal, low angle based on the mandibular plane angle and subjects with different sagittal dimensions will be grouped into Class 1, 2 and 3 using the ANB angle. Appropriate patient cases that show orthodontic treatment in overcoming such transverse discrepancies will be presented to help correlate the findings of this study for clinical application.

Biography

Soonshin Hwang has completed her Dental education at Creighton University, School of Dentistry. She has completed Advanced Education in General Dentistry program at Columbia University and Orthodontic specialty training at Yonsei University, Gangnam Severance Hospital. She is currently working at the Orthodontic Department of Gangnam Severance Hospital as a Clinical Assistant Professor.

sshwang@yuhs.ac

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