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Timing of adolescent growth spurt among children with different skeletal classes

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Treatment with the growth modification appliances is only successful if commenced at the right stage of adolescent growth spurt. Variations in the timing of adolescent growth spurt can affect the success of the treatment. The aim of this study was to compare the mean age of adolescent growth spurt among children with three skeletal classes. A cross-sectional study was conducted on the lateral cephalograms of 440 children (203 boys, 237 girls) aged 9-17 years. Subjects were categorized into three skeletal classes (Class I=187, Class II=169, Class III=84) according to the sagittal relationship between maxilla and mandible. The cervical vertebral maturation stages were recorded using Baccetti's method. The mean age at each cervical stage was compared between two genders and among three malocclusion using Mann-Whitney U and Kruskal-Wallis tests, respectively. The results of the study showed that the pubertal growth peak occurred on average 1.5 years earlier in girls than boys. The mean difference in the age of adolescent growth spurt between Class I and II girls was of 7.5 months ($p=0.026$) and between Class I and III boys was of 10.5 months ($p=0.022$). All boys older than 16.5 years and girls older than 16.0 years were found to be in cervical stage 6. However, timing of completion of the adolescent growth spurt is comparable among three skeletal classes.

Biography

Waqar Jeelani has completed his Bachelor of Dental Surgery from the National University of Science and Technology and pursuing his Post-graduate studies in Orthodontics at the Aga Khan University, Karachi, Pakistan. He is Chief Resident in the program of Orthodontics. Over the last few years, he has published 7 papers in reputed journals and has been serving as reviewer for several journals of good repute.

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