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Gambaran tahap maturasi tulang phalanx jari ketiga dan tulang servikal pada pasien ortodonsia umur 10-16 tahun (laporan penelitian)

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Abstrak

In orthodontics, it is important to assess the skeletal maturity in order to make accurate diagnosis and to plan for appropriate treatment. Evaluation of the skeletal maturity through developmental stages of middle phalanx of the third finger (MP3) and cervical vertebrae (CV) could help in predicting growth acceleration. The methods to evaluate maturity are being developed in order to obtain simple, low radiation and low cost tools for this purpose. The objectives of this study were to identify (1) MP3 maturation stages, (2) CV maturation stages, and (3) agreement between MP3 and CV of 10-16 year-old orthodontic patients. Skeletal maturity of 72 subjects from the Orthodontic Clinic at the Dental Faculty of University of Indonesia was assessed by classifying developmental stages of MP3 as seen in a periapical film and CV as seen on a lateral cephalometric film. MP3 was classified into six stages according to Rajagopal and Kansal method. CV was also classified into six stages as described by Cervical Vertebrae Maturation Index (CVMI). The results showed that (1) at the same chronological age, MP3 and CV maturation stages could vary and the stages follow a gradual chronologic progression; (2) large variation of MP3 maturation stages was found in 12 year-old females (MP3-FG to MP3-I) and in 13-14 year-old males (MP3-FG to MP3-HI), (3) large variation of CV maturation stages was found in 12 year-old females (CVMI 2 to 5) and in 12-13 year-old males (CVMI 1, 2, 3 and 5), and (4) an agreement of 70.8% between MP3 and CV maturation stages was found in 10-16 year-old orthodontic patients. This study concluded that besides CVMI, the maturation stages of MP3 could be used as an alternative method to assess the skeletal maturity in orthodontics.