

**HUBUNGAN TAHAP MATURASI VERTEBRA SERVIKALIS
TERHADAP TAHAP MATURASI SEKSUAL
PADA ANAK PEREMPUAN
USIA 8-14 TAHUN
(Kajian pada Radiograf Sefalometri Lateral di Instalasi Radiologi RSGM
Prof. Soedomo)**

INTISARI

Pubertas merupakan fase dalam pertumbuhan yang ditandai oleh perubahan maturasi seksual dan skeletal. Tahap maturasi seksual (Skala Tanner) umumnya dinilai menggunakan perubahan sekunder pubertas, sedangkan tahap maturasi vertebra servikalis (CVMS) dapat dinilai melalui radiograf sefalometri lateral. Penelitian ini bertujuan untuk menganalisis hubungan antara tahap maturasi vertebra servikalis dan tahap maturasi seksual pada anak perempuan usia 8–14 tahun.

Penelitian ini merupakan studi observasional analitik dengan rancangan *cross-sectional*. Sampel terdiri dari 52 anak perempuan yang menjalani pemeriksaan radiograf sefalometri lateral di RSGM Prof. Soedomo. Tahap maturasi vertebra servikalis dinilai menggunakan metode Baccetti, sedangkan tahap maturasi seksual dinilai menggunakan kuesioner *Pubertal Development Scale* yang dikonversi ke dalam Skala Tanner. Analisis data dilakukan menggunakan uji beda Kruskal–Wallis yang dilanjutkan dengan uji post hoc Mann–Whitney U, dan uji korelasi Spearman.

Hasil uji Kruskal–Wallis menunjukkan perbedaan signifikan tahap maturasi seksual berdasarkan tahap maturasi vertebra servikalis ($p < 0,001$). Uji *post hoc* Mann–Whitney U menunjukkan perbedaan bermakna antara tahap CVMS awal (tahap 1–3) dan tahap CVMS lanjut (tahap 4–5) ($p < 0,05$), sedangkan perbedaan antara CVMS tahap 4 dan 5 tidak signifikan ($p > 0,05$). Uji korelasi Spearman menunjukkan hubungan positif yang kuat antara tahap maturasi vertebra servikalis dan tahap maturasi seksual ($r = 0,790$; $p = 0,000$). Kesimpulan penelitian ini menunjukkan bahwa terdapat perbedaan bermakna dan hubungan positif yang kuat antara tahap maturasi vertebra servikalis dan tahap maturasi seksual pada anak perempuan usia 8–14 tahun.

Kata kunci:

pubertas, maturasi seksual, maturasi vertebra servikalis, CVMS, skala Tanner, anak perempuan, radiografi sefalometri lateral

**RELATIONSHIP BETWEEN THE STAGE OF CERVICAL VERTEBRA
MATURATION AND THE STAGE OF SEXUAL MATURATION
IN GIRLS AGED 8-14 YEARS
(A Study of Lateral Cephalometric Radiographs at the Radiology
Department of RSGM Prof. Soedomo)**

ABSTRACT

Puberty is a phase of growth characterized by sexual and skeletal maturation. The stage of sexual maturation (Tanner Scale) is generally assessed using secondary pubertal changes, while the stage of cervical vertebral maturation (CVMS) can be assessed through lateral cephalometric radiographs. This study aims to analyze the relationship between cervical vertebral maturation stage and sexual maturation stage in girls aged 8–14 years.

This study is an analytical observational study with a cross-sectional design. The sample consisted of 52 girls who underwent lateral cephalometric radiography at RSGM Prof. Soedomo. The stage of cervical vertebral maturation was assessed using the Baccetti method, while the stage of sexual maturation was assessed using the Pubertal Development Scale questionnaire converted to the Tanner Scale. Data analysis was performed using the Kruskal–Wallis test followed by the Mann–Whitney U post hoc test and Spearman correlation test.

The Kruskal–Wallis test results showed significant differences in sexual maturation stages based on cervical vertebral maturation stages ($p < 0.001$). The Mann–Whitney U post hoc test showed a significant difference between the early CVMS stage (stages 1–3) and the advanced CVMS stage (stages 4–5) ($p < 0.05$), while the difference between CVMS stages 4 and 5 was not significant ($p > 0.05$). The Spearman correlation test showed a strong positive relationship between cervical vertebral maturation stage and sexual maturation stage ($r = 0.790$; $p = 0.000$). The conclusion of this study shows that there are significant differences and a strong positive relationship between cervical vertebral maturation stage and sexual maturation stage in girls aged 8–14 years.

Keywords:

puberty, sexual maturation, cervical vertebral maturation, CVMS, Tanner Scale, girls, lateral cephalometric radiography