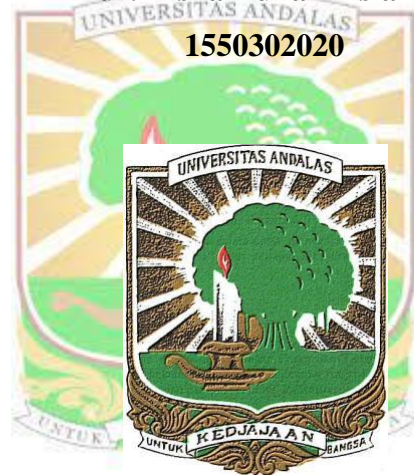


**KADAR *1,25-DIHYDROXYVITAMIN D* (KALSITRIOL)
BERDASARKAN STADIUM PENYAKIT GINJAL KRONIK
PADA ANAK**

TESIS

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ABSTRAK

KADAR 1,25-DIHYDROXYVITAMIN D (KALSITRIOL) BERDASARKAN STADIUM PENYAKIT GINJAL KRONIK PADA ANAK

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Latar Belakang. Kerusakan ginjal pada penyakit ginjal kronik (PGK) menyebabkan gangguan pada enzim *α-1-hydroxylase* sehingga tidak terjadi perubahan vitamin D menjadi bentuk aktif kalsitriol. Belum ada penelitian sebelumnya yang menilai kalsitriol pada anak PGK khususnya di Sumatera Barat. Kemungkinan penurunan kadar vitamin D telah terjadi pada stadium awal maka sangat penting diteliti apakah anak dengan PGK stadium awal di Sumatera Barat sudah ditemukan memiliki kadar kalsitriol yang rendah.

Tujuan Penelitian. Mengetahui rerata kadar kalsitriol berdasarkan stadium PGK anak di RSUP Dr. M. Djamil Padang.

Metode. Penelitian potong lintang dilakukan pada 43 pasien PGK anak. Dilakukan pemeriksaan kadar kalsitriol di laboratorium, kemudian dianalisis data secara univariat dan multivariat dengan derajat kemaknaan $p=0,05$.

Hasil. Rerata kadar kalsitriol pada pasien PGK anak adalah $108,77 \pm 10,79$ pmol/L. Rerata pada stadium I $164,28 \pm 160,90$ pmol/L, stadium II $94,14 \pm 50,63$ pmol/L, stadium III $72,16 \pm 13,18$ pmol/L, stadium IV $62,92 \pm 4,87$ pmol/L, stadium V $67,51 \pm 4,87$ pmol/L. Tidak terdapat perbedaan signifikan kadar kalsitriol berdasarkan karakteristik pertumbuhan ($p=0,944$), etiologi ($p=0,311$) dan anemia ($p=0,104$). Tidak terdapat perbedaan rerata kadar kalsitriol secara signifikan pada masing-masing stadium PGK ($p=0,114$). Terdapat perbedaan signifikan kadar kalsitriol pada PGK berdasarkan stadium awal dan stadium lanjut ($p=0,004$). Penurunan kadar kalsitriol secara signifikan pada PGK stadium IV ($p=0,049$) dan stadium V ($p=0,027$).

Kesimpulan. Terdapat perbedaan signifikan kadar kalsitriol berdasarkan PGK stadium awal dan stadium lanjut.

Kata kunci. Kalsitriol, penyakit ginjal kronis, anak

ABSTRACT

THE LEVEL OF CALCITRIOL BASED ON STAGES OF CHRONIC KIDNEY DISEASE IN CHILDREN

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Background. Kidney damage in CKD causes disruption with the α -1-hydroxylase enzyme so the changes of vitamin D into the active form of calcitriol will not occur. There have been no previous studies assessing calcitriol in children with CKD, especially in West Sumatra. Decrease in vitamin D levels may occurred at an early stage, so it is very important to evaluate whether children with early stage CKD in West Sumatra have been found to have low level of calcitriol.

Aim. To describe the mean calcitriol level based on the staging of children's CKD stage at Dr. M. Djamil Hospital Padang.

Method. This cross-sectional study was conducted on 43 pediatric CKD patients. Calcitriol level were examined in the laboratory, univariate and multivariate analysis were conducted with significance degree of $p = 0.05$.

Result. The mean of calcitriol level in children with CKD was 108.77 ± 10.79 pmol/L. Mean level at stage I to stage V were 164.28 ± 160.90 , 94.14 ± 50.63 , 72.16 ± 13.18 , 62.92 ± 4.87 , and 67.51 ± 4.87 pmol/L, respectively. There was no significant difference in calcitriol level based on growth characteristics ($p = 0.944$), etiology ($p = 0.311$) and anemia status ($p = 0.104$) in pediatric CKD patients. There was no significant difference in the mean calcitriol level at each stage of CKD ($p = 0.114$). There was a significant difference in calcitriol level in CKD on the early stage and the advanced stage ($p = 0.004$). Calcitriol level was significantly decreased in CKD stage IV ($p = 0.049$) and stage V ($p = 0.027$).

Conclusion. There were significant differences in calcitriol levels based on early stage and advanced stage CKD.

Keywords. Calcitriol, chronic kidney disease, children.