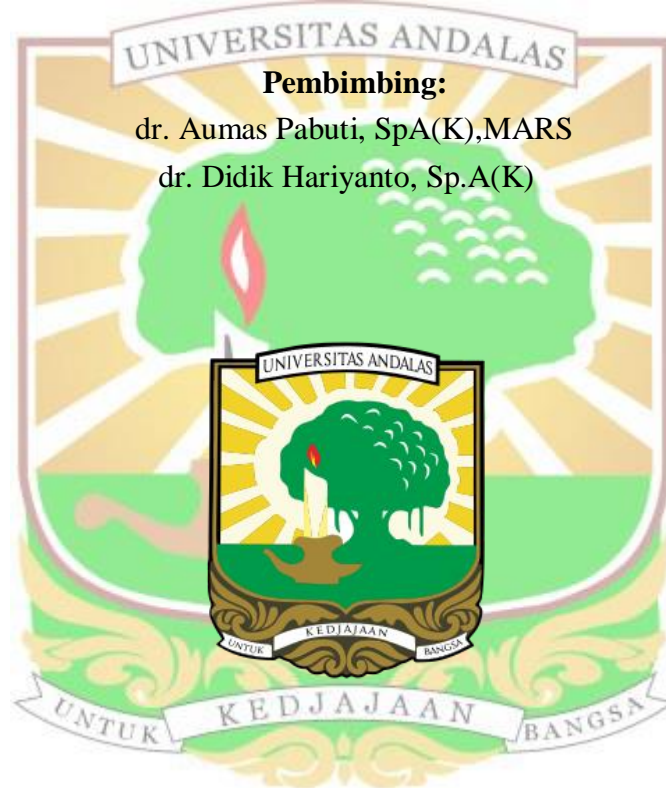


**HUBUNGAN STADIUM PENYAKIT GINJAL KRONIS ANAK DENGAN
KETEBALAN TUNIKA INTIMA MEDIA ARTERI KAROTIS**

TESIS

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ABSTRAK

HUBUNGAN STADIUM PENYAKIT GINJAL KRONIS ANAK DENGAN KETEBALAN TUNIKA INTIMA MEDIA ARTERI KAROTIS

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Latar belakang. Proses atherosklerosis telah dimulai pada masa kanak-kanak dan berhubungan dengan faktor risiko kardiovaskular tradisional seperti hipertensi, obesitas, dan dislipidemia. Penyakit Ginjal Kronik (PGK) memiliki risiko tinggi mengalami atherosklerosis karena selain memiliki faktor risiko tradisional tersebut terdapat pula faktor risiko non tradisional seperti *Mineral Bone Metabolism*, proteinuria, dan inflamasi yang mendukung perluasan atherosklerosis. Perubahan kardiovaskular dini dapat dideteksi pada awal PGK melalui pemeriksaan ultrasonografi dengan menilai *Carotid Intima Media Thickness* (cIMT).

Tujuan. Mengetahui hubungan stadium penyakit ginjal kronis anak dengan ketebalan tunika intima media arteri karotis.

Metode. Penelitian *cross sectional*, dilakukan di Poliklinik Nefrologi Anak dan ruang rawat anak RSUP Dr. M. Djamil Padang pada Januari-Juli 2024. Subjek penelitian adalah pasien anak PGK. Pada subjek penelitian dilakukan pemeriksaan fungsi ginjal, profil lipid, urinalisis, dan pengukuran cIMT.

Hasil. Empat puluh tiga anak PGK dengan berbagai stadium menjadi subjek penelitian, cIMT >P90 sebanyak 33 (76,7%), hipertensi 31 (72,1%), hiperkolesterolemia 28 (65,1%), HDL <40 sebanyak 25 (58,1%), LDL ≥ 130 sebanyak 25 (58,1%), hipertrigliseridemia 29 (67,4%), dan proteinuria 38 (88,4%). Analisis hubungan stadium PGK anak dengan dengan cIMT menunjukkan adanya hubungan yang bermakna dengan hasil uji statistik *Pvalue* 0,002 (*Pvalue* <0,05).

Kesimpulan. Tunika intima media arteri karotis pada kelompok anak PGK dengan hipertensi, dislipidemia, obesitas dan proteinuria sebagian besar menebal. Terdapat hubungan signifikan stadium PGK anak dengan ketebalan tunika intima media arteri karotis.

ABSTRACT

THE RELATIONSHIP BETWEEN THE STAGE OF CHRONIC KIDNEY DISEASE AND CAROTID INTIMA MEDIA THICKNESS IN CHILDREN

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Background. Atherosclerosis begins in childhood and is associated with traditional cardiovascular risk factors such as hypertension, obesity, and dyslipidemia. Chronic Kidney Disease (CKD) carries a high risk of atherosclerosis due to the presence of both traditional risk factors and non-traditional ones, such as mineral bone metabolism disorders, proteinuria, and inflammation, which contribute to the progression of atherosclerosis. Early cardiovascular changes can be detected at the onset of CKD through ultrasonographic evaluation by measuring Carotid Intima-Media Thickness (cIMT).

Objective. To determine the relationship between the stage of chronic kidney disease and carotid intima media thickness in children.

Methods. A cross-sectional study was conducted at the Pediatric Nephrology Clinic and Pediatric Ward of Dr. M. Djamil General Hospital, Padang, from January to July 2024. The study subjects were pediatric CKD patients. Renal function test, lipid profile, urinalysis, and cIMT measurement were performed on the subjects.

Results. Forty three children with CKD at various stages were included in the study. cIMT >P90 was observed in 33 children (76.7%), hypertension in 31 (72.1%), hypercholesterolemia in 28 (65.1%), HDL <40 mg/dL in 25 (58.1%), LDL \geq 130 mg/dL in 25 (58.1%), hypertriglyceridemia in 29 (67.4%), and proteinuria in 38 (88.4%). The analysis of the relationship between CKD stages and cIMT showed a significant association, with a statistical test yielding a P-value of 0.002 (P-value <0.05).

Conclusion. The carotid artery intima-media layer was predominantly thickened in children with CKD who also had hypertension, dyslipidemia, obesity, and proteinuria. There is a significant relationship between the stage of CKD and cIMT in children.