



DAFTAR ISI

HALAMAN JUDUL.....	i
LEMBAR PERSETUJUAN PRESENTASI.....	ii
PERNYATAAN BEBAS PLAGIASI.....	iii
KATA PENGANTAR.....	iv
DAFTAR ISI.....	vi
DAFTAR TABEL.....	viii
DAFTAR BAGAN.....	ix
DAFTAR GAMBAR.....	x
DAFTAR LAMPIRAN.....	xi
DAFTAR SINGKATAN.....	xii
ABSTRACT.....	xiv
INTISARI.....	xv
BAB I. PENDAHULUAN	
A. Latar Belakang.....	1
B. Rumusan Masalah.....	6
C. Pertanyaan Penelitian.....	6
D. Tujuan Penelitian.....	7
E. Manfaat Penelitian.....	7
F. Keaslian Penelitian.....	7
BAB II TINJAUAN PUSTAKA	
A. Neuropati Perifer Diabetik.....	9
1. Definisi.....	9
2. Klasifikasi.....	10
3. Patogenesis.....	11
4. Faktor Risiko.....	18
5. Gejala Klinis.....	19
6. Diagnosis.....	19
7. Keparahan dan Progresifitas Neuropati perifer Diabetik.....	22
B. Asam Urat Serum.....	26
1. Metabolisme dan Transport.....	26
2. Ambivalensi Biologis Asam Urat.....	29
3. Hiperurisemia dan penyakit Metabolik.....	30
4. Asam Urat, Diabetes dan Komplikasinya.....	32
5. Asam Urat dan Neuropati Diabetik.....	34
C. Kerangka Teori.....	36
D. Kerangka Konsep.....	37
E. Hipotesis.....	37
BAB III METODE PENELITIAN	
A. Rancangan Penelitian.....	38
B. Populasi Penelitian.....	38



C. Besar Sampel Penelitian.....	39
D. Variabel Penelitian	39
E. Definisi Operasional.....	40
F. Alat Penelitian	43
G. Tempat Penelitian.....	43
H. Prosedur Penelitian.....	43
I. Alur Penelitian.....	44
J. Pengolahan dan Analisis Data.....	44
K. Etika Penelitian	45
L. Jadwal Penelitian.....	45
BAB IV HASIL DAN PEMBAHASAN	
A. Hasil Penelitian dan Pembahasan.....	47
1. Karakteristik Dasar Subjek Penelitian... ..	47
2. Analisis Bivariat.....	52
3. Analisis Multivariat.....	71
B. Keterbatasan Penelitian.....	73
BAB V SIMPULAN DAN SARAN	
A. Simpulan... ..	74
B. Saran.....	74
DAFTAR PUSTAKA	75
LAMPIRAN.....	81



DAFTAR TABEL

Tabel 1. Keaslian Penelitian.....	8
Tabel 2. <i>Neuropathy Deficit Score</i> (NDS)-INA.....	25
Tabel 3. Variabel, Skala Pengukuran, dan Analisis Statistik.....	45
Tabel 4. Jadwal Penelitian.....	46
Tabel 5. Karakteristik Dasar Subjek Penelitian... ..	48
Tabel 6. Panduan interpretasi uji hipotesis korelatif.....	52
Tabel 7. Analisis bivariat variabel bebas dengan skor NDS-INA.. ..	53
Tabel 8. Analisis multivariat terhadap skor NDS-INA.....	72



DAFTAR BAGAN

Bagan 1. Metabolisme Asam Urat.....	26
Bagan 2. Kerangka Teori.....	36
Bagan 3. Kerangka Konsep.....	37
Bagan 4. Alur Penelitian.....	44



DAFTAR GAMBAR

Gambar 1. Pasokan vaskular saraf perifer.....	12
Gambar 2. Ringkasan mekanisme patogenetik neuropati diabetika	17
Gambar 3. <i>Scatter plot</i> korelasi kadar HbA1C dengan skor NDS-INA... ..	56
Gambar 4. <i>Scatter plot</i> korelasi durasi DM dengan skor NDS-INA.....	59
Gambar 5. <i>Scatter plot</i> korelasi kadar asam urat serum dengan skor NDS-INA... ..	65



DAFTAR LAMPIRAN

Lampiran 1. Lembar Penjelasan untuk Calon Subjek.....	81
Lampiran 2. Persetujuan Keikutsertaan dalam Penelitian.....	85
Lampiran 3. Lembar Kuesioner dan Instrumen Penelitian..	86
Lampiran 4. <i>Tools</i> Pemeriksaan NDS-INA	88
Lampiran 5. <i>Ethics Committee Approval</i>	89
Lampiran 6. Surat Ijin Penelitian..	90

DAFTAR SINGKATAN

ADP	: <i>Adenosine Diphosphat</i>
AGEs	: <i>Advanced Glycation End products</i>
AMP	: <i>Adenosine Monophosphate</i>
AR	: <i>Aldose Reductase</i>
ARI	: <i>Aldose Reductase Inhibitor</i>
ATP	: <i>Adenosine Triphosphate</i>
AUS	: <i>Asam Urat Serum</i>
BDNF	: <i>Brain-derived Neurotrophic Factor</i>
CAD	: <i>Coronary Artery Disease</i>
CAT	: <i>Catalase</i>
CMAP	: <i>Compound Muscle Action Potential</i>
CNTF	: <i>Ciliary Neurotrophic Factor</i>
COX-2	: <i>Cyclooxygenase</i>
DM	: <i>Diabetes Mellitus</i>
DPN	: <i>Diabetic Peripheral Neuropathy</i>
DSP	: <i>Distal Symmetric Polyneuropathy</i>
EDRF	: <i>Endothelial Derived Relaxing Factor</i>
ENMG	: <i>Elektroneuromiografi</i>
GBS	: <i>Guillain-Bare Syndrome</i>
GFR	: <i>Glomerular Filtration Rate</i>
GMP	: <i>Guanosine monophosphate</i>
GSH	: <i>Glutathione</i>
HbA1c	: <i>Hemoglobin A1c</i>
HDL	: <i>High Density Lipoprotein</i>
IDDM	: <i>Insulin Dependent Diabetes Mellitus</i>
IENFD	: <i>Intraepidermal Nerve Fiber Density</i>
IGF	: <i>Insulin-like Growth Factor</i>
IL-1	: <i>Interleukin-1</i>
IMP	: <i>Inosine monophosphate</i>
IMT	: <i>Indeks Massa Tubuh</i>
KHS	: <i>Kecepatan Hantar Saraf</i>
LDL	: <i>Low Density Lipoprotein</i>
MAPK	: <i>Mitogen Activated Protein Kinase</i>
MDNS	: <i>Michigan Diabetic Neuropathy Score</i>
MNCV	: <i>Motoric Nerve Conduction Velocity</i>
MNSI	: <i>Michigan Neuropathy Screening Instrument</i>
mRNA	: <i>messenger-RNA</i>
NAD	: <i>nicotinamice-adenine dinucleotide</i>
NADPH	: <i>Nicotinamide Adenine Dinucleotida Phosphatase</i>
NCS	: <i>Nerve Conduction Study</i>
NCV	: <i>Nerve Conduction Velocity</i>



NDS	: <i>Neuropathy Deficits Score</i>
NF-	: Nuclear Factor-
NGF	: <i>Nerve Growth Factor</i>
NIDDM	: <i>Non-Insulin Dependent Diabetes Mellitus</i>
NO	: Nitrit Oksida
NOS	: <i>Nitric Oxide Synthase</i>
NPB	: Nyeri Punggung Bawah
NSS	: <i>Neuropathy Symptom Score</i>
NT-3	: <i>Neurotrophin-3</i>
PAD	: <i>Peripheral Arterial Disease</i>
PARP	: <i>Poly-ADP-Ribose Polymerase</i>
PJK	: Penyakit Jantung Koroner
PKC	: Protein Kinase C
RAGE	: <i>Receptor Advanced Glycation End Products</i>
ROS	: <i>Reactive Oxygen Species</i>
SFN	: <i>Small-Fiber Neuropathy</i>
SNCV	: <i>Sensoric Nerve Conduction Velocity</i>
SOD	: Superoksida Dismutase
STZ	: <i>Streptozotocin</i>
TGF-	: <i>Tumour Growth Factor-</i>
TNF-	: <i>Tumour Necrotizing Factor-</i>
UDNS	: Utah Diabetic Neuropathy Study
XDH	: <i>xanthine dehydrogenase</i>
XOD	: <i>Xanthine Oxidase</i>
VCAM-1	: <i>Vascular Cell Adhesion Molecule-1</i>
VEGF	: <i>Vascular Endothelial Growth Factor</i>