

## DAFTAR PUSTAKA

- ACOG. 2013. Hypertension in pregnancy. Washington DC: The American College of Obstetricians and Gynecologist.
- Adelman DM, Gertsenstein M, Nagy A, Simon MC, Maltepe E. 2000. Placental cell fates are regulated in vivo by HIF-mediated hypoxia responses. *Genes Dev* 14(24):1391-3203.
- Akhiles M, Mahalingam V, Nalliah S, et al. 2013. Hypoxia inducible factor-1 $\alpha$  as a predictive marker in preeclampsia. *Biomed Rep* 1:257–258.
- Akhter Q, Masood A, Ashraf R, Majid S, et al. 2012. Polymorphism in the 3'UTR of the human leptin gene and their role in hypertension. *Molecular Medicine Reports* 5 :1058-1062.
- Alan T, William W, Andrews. 2010. Diagnosis and Management of Clinical Chorioamnionitis. *Clin Perinatol* 37(2): 339-354.
- Albert PR. 2011. What is a functional genetic polymorphism? Defining classes of functionality. *J Psychiatry Neurosci* 36(6): 363-365.
- Al Ghazali BS and Al Ghazali BA. 2014. Study of role of serum leptin level in the detection of preeclampsia and its severity. *International Journal of Advanced Technology and Innovative Research* 6(8): 816-819.
- Ambrosioni G, Nath AK, Sierra-Honigmann MR, Flores RJ. 2002. Transcriptional activity of the human leptin gene in response to hypoxia. *J Biol Chem* 277: 34601–34609.
- Amelia R. 2016. Perbedaan Berat Lahir Bayi Pasien Preeklamsia Berat / Eklampsia Early dan Late Onset di RSUP Dr. M. Djamil Padang. *Jurnal Kesehatan Andalas* 5(1).
- Anabhuti and Arora S. 2008. Leptin and its metabolic in actions-an update. *Diabetes, Obesity and Metabolism* 10: 973-993.
- Anderson CM and Ren J. 2002. Leptin, leptin resistance and endothelial dysfunction in preeclampsia. *Cellular and Molecular Biology* 48: 323-329.
- Andriani C, Lipoeto NI, Utama BI. 2016. Hubungan index massa tubuh dengan kejadian preeklamsia di RSUP Dr M Djamil Padang. *Jurnal Kesehatan Andalas* 5(1): 173-177.
- Anim-Nyame, Sooranna SR, Steer PJ, Johnson MR. 2000. Longitudinal analysis of maternal plasma leptin concentration during normal pregnancy and preeclampsia. *Human Reprod* 15: 2033-2036.

- Artikasari, Kurniawati. 2009. Hubungan antara primigravida dengan angka kejadian preeklamsia/eklamsia di RSUD DR. Moewardi Surakarta periode 1 Januari – 31 Desember 2008. Skripsi. Surakarta. Universitas Muhammadiyah Surakarta.
- Aslan N. 2009. Perbandingan ekspresi vascular endothelial growth factor plasenta pada preeklamsia berat onset dini dan onset lambat. Tesis. Makassar. Universitas Hasanuddin.
- Babu M Sathish, Zachariah Bobby, S Habeebulah, K Srilatha, V Lalitha, G Niranjana. 2014. Fasting Insulin levels, Lipid Profile and Proteinuria and Index of Cardiovascular Risk in Euglycemic Preeklamsia. *Jour of Med SC and Tech* 3(1) : 24-29.
- Berg CJ, Mackay AP, Qin C, Callaghan WM. 2009. Overview of maternal morbidity during hospitalization for labor and delivery in the United States: 1993–1997 and 2001–2005. *Obstet. Gynecol* 113: 1075–1081.
- Bobek G, Surmon L, Mirabito KM, et al. 2015. Placental regulation of inflammation and hypoxia after TNF- $\alpha$  infusion in mice. *Am J Reprod Immunol* 74: 407–418.
- Bolin M. 2012. Pre-eclampsia- possible to predict? a biochemical and epidemiological study of pre-eclampsia. Dissertation, Universitas Upsaliensi.
- Baumaiza I, Omezzine A, Rejeb J, et al. 2012. Relationship between leptin G2548A and leptin receptor Q223R gene polymorphisms and obesity and metabolic syndrome risk in Tunisian volunteers. *Genetic Testing and Molecular Biomarkers* 16(7): 726-733.
- Cannigia I, Winter J, Lye SJ, Post M. 2000. Oxygen and placental development during first trimester: implications for the pathophysiology of preeclampsia. *Placenta* 21: 25-30.
- Chaiworapongsa T, Chaemsaitong P, Yeo L, Romero R. 2014. Pre-eclampsia part 1: current understanding of its pathophysiology. *Nat Rev Nephrol* : 1-15.
- Cheng MH and Wang PH. 2009. Placentation abnormalities in pathophysiology of preeclampsia. *Expert Rev Mol Diagn* 9(1): 37-49.
- Critchley H, Maclean A, Poston L, Walker J, editors. 2003. Pre-eclampsia. London; ROG press.
- Cunningham FG, et al. 2014. Hypertensive disorder in pregnancy. Dalam *William Obstetric* 23 ed. New York: McGraw-Hill Companies Inc.
- Danianto a, Ernawati . 2015. Perbedaan Kadar IL-10 pada Preeklamsia Tipe Dini dan Lambat. *Majalah Obstetri and Ginekologi* 23(3): 106-111.

- Data rekam medik RSUP Dr M Djamil Padang tahun 2011.
- Data rekam medik RSUP Dr M Djamil Padang tahun 2012.
- Data rekam medik RSUP Dr M Djamil Padang tahun 2013.
- Data rekam medik RSUP Dr M Djamil Padang tahun 2017.
- Davison JM, Homuth V, Jeyabalan A, et al. 2004. New aspect in the pathophysiology of pre-eclampsia. *J Am Soc Nephrol* 15(9): 2440-2448.
- Davutoglu A, Akkaya Firat A, Ozel A, et al. 2017. Evaluation of maternal serum hypoxia inducible factor-1 $\alpha$ , progranulin and syndecan-1 levels in pregnancies with early- and late-onset preeclampsia. *J matern Fetal Neonatal Med* 31(15): 1976-1982.
- Dekker GA and Sabai BM. 1998. Etiology and pathogenesis of preeclampsia: current concepts. *Am J Obstet Gynecol* 179(5):1359-1375.
- Denantika O, Serudji J, Revilla G. 2015. Hubungan Status Gravida dan Usia Ibu terhadap Kejadian Preeklampsia di RSUP Dr. M. Djamil Padang Tahun 2012-2013. *Jurnal Kesehatan Andalas* 4(1).
- El Shahat AM, Ahmed AB, Ahmed MR, Mohamed HS. 2013. Maternal serum leptin as a marker of preeclampsia. *Arch Gynecol Obstet* 288(6):1317-1322.
- Fan C, Wu Z, Tang Y, et al. 2016. Prepregnancy body mass index and the risk of preeclampsia: a meta-analysis of cohort studies. *Int J Clin Exp Pathol* 9(3): 3070-3082.
- Farias DR, Sena AB, Rebelo F, et al. 2016. Polymorphism of leptin (g2548a) and leptin receptor (q223r and k109r) genes and blood pressure during pregnancy and the postpartum period: a cohort. *American Journal of Hypertension* : 1-11.
- Gathiram P and Moodley J. 2016. Pre-eclampsia: its pathogenesis and pathophysiology. *Cardiovasc J Afr* 27(2): 71-78.
- Genbacev O, Zhou Y, Ludlow JW, Fisher SJ. 1997. Regulation of human placental development by oxygen tension. *Science* 277: 1669-1672.
- Grill S, Rusterholz C, Zaneti DR, et al. 2009. Potensial markers of preeclampsia-a review. *Reprod Biol Endocrino* 7(70):1-14.
- Grosfeld A, Andre J, Hauguel-de MS, Berra E, Pouyssegur J, Guerre MM. 2002. Hypoxia inducible factor-1 transactivates the human leptin gene promoter. *J Biol Chem* 277:42953-42957.
- Grosfeld A, Turban S, Andre J, et al. 2001. Transcriptional effect of hypoxia on placental leptin. *FEBS Lett* 502:122-126.

- Gursoy T, Alienfendioglu D, Aslan AT, et al. 2002. Preeclampsia disrupts the normal physiology of leptin. *Am J Perinatol* 19(6): 303-310.
- Haugen F, Ranheim T, Harsem NK, Lips E, Staff AC, Drevon CA. 2006. Increased plasma levels of adipokines in preeclampsia: relationship to placenta and adipose tissue gene expression. *Am J Physiol Endocrinol Metab* 290:326–333.
- Hoegh AM, Borup R, Nielsen, Sorensen S. 2010. Gene expression profiling of placentas affected by preeclampsia. *Journal of Biomedicine and Biotechnology*:1-11.
- Hoffstedt J, Eriksson P, Arner P, et al. 2002. A polymorphism in the leptin promoter region (-2548 G/A) influences gene expression and adipose tissue secretion of leptin. *Horm Metab Res* 34(7): 355-359.
- Hogg K, Blair JD, Dadelszen PV, Robinson WP. 2013. Hypomethylation of the LEP gene in placenta and elevated maternal leptin concentration in early preeclampsia. *Molecular and Cellular Endocrinology* 367: 64-73.
- Hoggard N, Hagarty P, Thomas L, Lea RG. 2001. Leptin expression in placental and fetal tissues: does leptin have a functional role?. *Biochemical Society Transactions* 29(2): 57-63.
- Huppert B. 2008. Placental origins of preeclampsia: challenging the current hypothesis. *Hypertension* 51(4):970-975.
- Iftikhar U, Iqbal A, Shakoor. 2010. Relationship between leptin and lipids during preeclampsia. *J Pak Med Assc* 60: 432-435.
- Iftikhar U, Khoja A, Mehjabeen, Iqbal A, Kharira KA. 2008. Evaluation of serum leptin levels during normal pregnancy and in pre-eclampsia. *J Ayub Med Coll Abbottabad* 20(4): 137-140.
- Imigawa K, Numata Y, Katsura G et al. 1998. Structure-function studies of human leptin. *The American Society for Biochemistry and Molecular Biology* 273(52): 35245-35249.
- Iwagaki S, Yokoyama Y, Tang L, Tamaya T. 2004. Augmentation of leptin and hypoxia-inducible factor 1 alpha mRNAs in preeclamptic placenta. *Gynecological Endocrinology* 18(5):263268.
- Iciek R, Ozegowska EW, Kurnazawinska G, et al. 2008. The (-2548G/A) polymorphism of leptin gene in women with gestational hypertension and preeclampsia. *Ginekol Pol* 79(5).
- Jenkins LD, Power RW, Adotey M, et al. 2007. Maternal leptin concentration are similar in african americans and caucasians in normal pregnancy, preeclampsia and small for gestational age infants. *Hypertens Pregnancy* 26(1): 158-163.

- Jonathan CV, Jeronimo LA, Brenda CV, et al. 2013. G-2548a leptin promoter and q223r leptin receptor polymorphism in obese mexican subjects. *American Journal of Agricultural and Biological Science* 8(1):34-43.
- Karki R, Pandya D, Elston RC, Ferlini C. 2015. Defining “mutation” and “polymorphism” in the era of personal genomics. *BMC medical Genomics* 8(37): 1-7.
- Kharb S, Panjeta P, Ghalaut VS, Bala J, Nanda S. 2016. Maternal factors affecting serum leptin levels in preeclampsia and normotensive pregnant women and outcome of pregnancy. *J Preg Child Health* 3(1):1-4.
- Khodzhaeva ZS, Kogan EA, Klimenhenko NI, et al. 2015. Clinical and pathogenic features of early and late preelampsia. *Akushertivo I Ginekologiya/Obstetric and Gynecology* 1: 12-17.
- Khosrowbeygi A and Ahmadvand H. 2013. Leptin to adiponectin ratio in preeclampsia. *Bangladesh Med Res Counc Bull* 39:18-21.
- Kimura C, 2012. The severity of hypoxic changes and oxydative DNA damage in the placenta of early onset preeclamptic women and fetal growth retriCTION. *J Matern Fetal Neonatal Med*:1-6.
- Kocyigit Y, Bayhan G, Atamer A, Atamer Y. 2004. Serum levels of leptin, insulin-like growth factor-1 and insulin-like growth factor binding protein-3 in women with pre-eclampsia, and their relationship to insulin resistance. *Gynecol Endocrinol* 18:341-348.
- Kumari N, Dash K, Singh R. 2016. Relationship between Maternal Age and Preeclampsia. *Jurnal of Dental and Medical Sciences* 15(12): 55-57.
- Lam C, Lim KH, Karumanchi A. 2005. Circulating angiogenic factors in pathogenesis and prediction of preeclampsia. *Hypertension* 46: 1077-1085.
- Lamminpaa R, Gissler M, Heinonen S, et al. 2012. Preeclampsia complicated by advanced maternal age: a registry-based study on primiparous women in Finland 1997-2008. *BMC Pregnancy Childbirth* 12: 47.
- Laivuori H, Gallaher MJ, Collura L, et al. 2006. Relationships between maternal plasma leptin, placental leptin mRNA and protein in normal pregnancy, preeclampsia and intrauterine growth restriction without preeclampsia. *Mol Hum Reprod* 12:551–556.
- Lee J, Giordano S, Zhang J. Autophagy, mitochondria and oxidative stress: cross-talk and redox signalling. *Biochem J* 441(2):523-540.
- Lepercq J, Guerre M, Andre J, Cauzac M, Hauguel-de Mouzon, S. 2003. Leptin: A potential marker of placental insufficiency. *Gynecol. Obstet Investig* 55:151–155.

- Levine RJ, Maynard SE, Qian C, et al. 2004. Circulating angiogenic factors and the risk of preeclampsia. *N. Engl. J Med* 350:672–683.
- Li RH, Poon SC, Yu MY, Wong YF. 2004. Expression of placental leptin and leptin receptors in preeclampsia. *International Journal of Gynaecological Pathology* 23: 378-385.
- Li YX, Zhang Q, Shang XM, et al. 2014. Association of two well-defined polymorphisms in leptin and leptin receptor genes with hypertension and circulating leptin: a meta-analysis. *Archives of Medical Research* :1-9.
- Linnemann K, Malek A, Sager R, Blum WF, Schneider H, Fusch C. 2000. Leptin production and release in the dually in vitro perfused human placenta. *J. Clin Endocrinol Metab* 85: 4298–4301.
- Lienneman K, Malek A, Schneider H, Fusch C. 2001. Physiological and pathological regulation of feto/placento/maternal leptin expression. *Biochem Soc Trans* 29:86-90.
- Lisonkova S, Sabr Y, Mayer C, Young C, Skoll A, Joseph KS. 2014. Maternal morbidity associated with early onset and late onset preeclampsia. *Obstet Gynecol* 124(4):771-781.
- Liu Y, Lou YQ, Liu JL, et al. 2014. Role of leptin receptor gene polymorphism in susceptibility to the development of essential hypertension: a case control association study in a north han chinese population. *Journal of Human Hypertension* 28: 551-556.
- MacKay AP, Berg CJ, Atrash HK. 2001. Pregnancy-related mortality from preeclampsia and eclampsia. *Obstet Gynecol* 97(4):533–538.
- Magee LA, Pels A, Helewa M, et al. 2014. Diagnosis, evaluation, and management of hypertensive disorders of pregnancy: executive summary. *J Obstet Gynaecol Can* 36(5): 416-438.
- Masuyama H, Segawa T, Sumida Y, et al. 2010. Different profiles of circulating angiogenic factors and adipocytokines between early onset preeclampsia and late onset preeclampsia. *BJOG: An International Journal of Obstetrics and Gynaecology* 117(3): 314-320.
- Masuzaki H, Ogawa Y, Sagawa N, Hosoda K, Matsumoto T. 1997. Nonadipose tissue production of leptin: leptin as a novel placenta derived hormone in human. *Nature Medicine* 3(9):1029-1033.
- Maymo JL, Perez AP, Gambino Y, Calvo JC, Margalet VS, Varone CL. 2011. Review: Leptin gene expression in the placenta- regulation of a key hormone in trophoblast proliferation and survival. *Placenta* 32 Supplement B Trophoblast Research 25:146-153.

- Miehle K, Stepan H, Fasshauer M. 2012. Leptin, adiponektin and other adipokines in gestation mellitus and pre-eclampsia. *Clinical Endocrinology* 76: 2-11.
- Mikat B, Gellhaus A, agner N, Birdir C, Kimmig R, Koninger A. 2012. Early detection of maternal risk for preeclampsia. *ISRN Obstetric and Gynecology* 2012: 1-7.
- Mirkovic L, Nejkovic L, Micic J. 2018. A new pathophysiological concept and new classification of pre-eclampsia. *Vojnosanit Pregl* 75(1): 83-94.
- Mise H, Sagawa N, Matsumoto T, et al. 1998. Augmented Placental Production of Leptin in Preeclampsia: Possible Involvement of Placental Hypoxia. *Journal Of Clinical Endocrinology and Metabolism* 83(9): 3225-3229.
- Molvarec A, Szarka A, Walentin S, et al. 2011. Serum leptin level in relation to circulating cytokines, chemokines, adhesion molecules and angiogenic factor in normal pregnancy and preeclampsia. *Reproductive Biology and Endocrinology* 9: 124.
- Moore LE, Wallace KL, Alexander BT, May WL, Thigpen BD, Bennet WA. 2003. Reduced placental perfusion causes an increase in maternal serum leptin. *Placenta* 24: 877-881.
- Mrema D, Lie RT, Ostbye T, et al. 2018. The association between pre pregnancy body mass index and risk of preeclampsia: a registry based study from Tanzania. *BMC pregnancy Childbirth* 18(56).
- Mumtaz F, Memon AR, Yousfani S, et al. 2008. Role of serum leptin level as marker of severity of preeclampsia. *J Ayub Med Coll Abbottabad* 20(1): 13-15.
- Muy-Rivera M, [Ning Y](#), [Frederic IO](#), [Vadachkoria S](#), [Luthy DA](#), [Williams MA](#). 2005. Leptin, soluble leptin receptor and leptin gene polymorphism in relation to preeclampsia risk. *Physiol Res* 54(2):167-174.
- Nagy B, Varkonyi T, Molvarec A, et al. 2009. Leptin gene (TTTC) (n) microsatellite polymorphism in preeclampsia and HELLP syndrome. *Clin Chem Lab Med* 47(9): 1033-1037.
- Nindrea RD. 2016. *Pengantar langkah-langkah praktis studi metaanalisis*. Yogyakarta: Gosyen Publishing.
- Ning Y, William MA, Muy M, Leisenring, Luthy. 2004. Relationship of maternal plasma leptin and risk factor of preeclampsia: a prospective study. *The Journal of Maternal-Fetal and Neonatal Medicine* 15:186-192.
- Nursal DG, Tamela P, Fitrayeni. 2014. Faktor risiko kejadian preeklampsia pada ibu hamil di RSUP Dr M Djamil Padang tahun 2014. *JKMA*:38-44.
- Nusken E, Hermann Y, Wohlfarth, et al. 2015. Strong hypoxia reduces leptin synthesis in purified primary human trophoblast. *Placenta* 36: 427-432.

- Ogge G, Chaiworapongsa T, Romero R, et al. 2011. Placental lesions associated with maternal underperfusion are more frequent in early onset than late onset preeclampsia. *Journal of Perinatal Medicine* 3(6):641-652.
- Paracchini V, Pedotti P, Taioli E. 2005. Genetics of leptin and obesity: a huge review. *American Journal of Epidemiology* 162(2):101-114.
- Patel J, Landers K, Mortimer RH, Richard K. 2010. Regulation of hypoxia inducible factors (hif) in hypoxia and normoxia during placental development. *Placenta* 31:951-957.
- Poston L. 2002. Leptin and preeclampsia. *Seminars in Reproductive medicine* 20(2): 131-138.
- Rajakumar A, Conrad KP. 2000. Expression, ontogeny, and regulation of hypoxia inducible transcription factors in human placenta. *Biol Reprod* 63(2): 577-587.
- Rajakumar A, Doty K, Daftary A, Harger G, Conrad KP. 2003. Impaired oxygen-dependent reduction of HIF-1 alpha and -2alpha proteins in preeclamptic placentae. *Placenta* 24(2-3):199-208.
- Ramma W, Buhimschi IA, Zhao G, et al. 2012. The elevation in circulating anti-angiogenic factors is independent of markers of neutrophil activation in preeclampsia. *Angiogenesis* 15: 341-348.
- Rath G, Aggarwal R, Jawanjal P, Tripathi R, Batra A. 2014. Hif-1 alpha and placental growth factor in pregnancies complicated with preeclampsia: a qualitative and quantitative analysis. *Clin Lab Anal.* (1):75-83.
- Raymond D and Peterson E. 2011. A critical review of early-onset and late-onset preeclampsia. *Obstetrical and gynecological* 66(8): 497-507.
- Redman CW and Sargent IL . 2003. Pre-eclampsia, the placenta and the maternal systemic inflammatory response, a review. *Placenta Supplement A Trophoblast Research* 71:21-27.
- Redman CW and Sargent IL. 2005. Latest advances in understanding preeclampsia. *Science* 308: 1592-1592.
- Rigo J, Szendei G, Rosta K, et al. 2006. Leptin receptor gene polymorphisms in severe preeclampsia women. *Gynecological Endocrinology*22(9): 521-525.
- Roberts J. 2009. Pregnancy related hypertension. In (Creasy R, Resnik R, Iams JD, editors) *maternal-fetal medicine: principles and practice* 6. Philadelphia: Saunders Elsevier, pp 650–88.
- Roflo A, Many A, Racano A, et al. 2010. Abnormalities in oxygen sensing define early and late onset preeclampsia as distinct pathologies. *Plos One* 5(10): 13288.



- Roshadi, R. 2004. Hipertensi dalam kehamilan. In(Hariadi R) ilmu kedokteran fetomaternal. Himpunan Kedokteran Fetomaternal Perhimpunan Obstetri dan Ginekologi Indonesia. Surabaya, pp 494-500.
- Sagawa N, Yura S, Itoh H, et al. 2002. Role of leptin in pregnancy- a review. *Plasenta*23; 80-86.
- Sahai K, Saraswathy S, Yadav T, Arora D, Krishnan M. 2016. Preeclampsia: molecular events biomarker. *Med J Armed Forces India* 73(2):167-174.
- Sahin S, Rustemoglu A, Tekcan S, et al. 2013. Investigation of Associations between Obesity and *LEP* G2548A and *LEPR* 668A/G Polymorphisms in a Turkish Population. *Dis Markers* 35(6): 673-677.
- Salimi S, Mashhadi FF, Naghavi A, et al. 2014. Different profile of serum leptin between early onset and late onset preeclampsia. Hindawi Publishing Corporation *Disease Markers*: 1-7.
- Sastroasmoro S. 2011. *Dasar-dasar metodologi penelitian klinis*. Jakarta: Sagung Seto.
- Semenza GL, Agani F, Booth G, et al. 1997. Structural and functional analysis of hypoxia inducible factor1. *Kidney Int* 51(2): 553-555.
- Shintani M, Ikegami H, Fujisawa T, Kawaguchi Y, et al. 2002. Leptin Gene Polymorphism Is Associated with Hypertension Independent of Obesity. *The Journal of Clinical Endocrinology & Metabolism* 87(6): 2904-2912.
- Sibai BM, Ewell M, Levine RJ et al. 1997. Risk factors associated with preeclampsia in healthy nulliparous women: the calcium for preclampsia prevention (cpep) study group. *Am J Obstet Gynecol* 177(5): 1003-1010.
- Singh S, Euliano TY, Michalopoulos K, et al. 2018. Photoplethysmography and Heart Rate Variability for the Diagnosis of Preeclampsia. *Anesth Analg* 126(3): 913-919.
- Sivan E, Whittaker PG, Sinha D, et al. 1998. Leptin in human pregnancy: the relationship with gestational hormones. *Am J Obstet Gynecol* 179(5):1128-1132.
- Smith RA, Kenny LC. 2006. Review current thoughts on the pathogenesis of preeclampsia. *Royal Collage of Obstetrician and Gynaecologist* 8:7-13.
- Sofowan S. 2003. Preeklamsia-eklamsia di beberapa rumah sakit di Indonesia, patogenesis dan kemungkinan pencegahannya. Pidato pengukuhan jabatan Guru Besar pada Fakultas Kedokteran Universitas Gajah Mada, Yogyakarta.
- Sohlberg S, Stephansson O, Cnattingius S, et al. 2012. Maternal body mass index, height, and risks of preeclampsia. *Am J Hypertens* 25(1): 120-125.

- Soleymanlou N, Jurisica I, Nevo O, et al. 2005. Molecular evidence of placental hypoxia in preeclampsia. *The Journal of Endocrinology and Metabolism* 90(7):4299-4308.
- Sugathadasa BHKR, Tennekoon KH, Karunanayake EH et al. 2010. Association of –2548 g/ a polymorphism in the leptin gene with preeclampsia/ pregnancy-induced hypertension. *Hypertension in Pregnancy* 29: 366-374.
- Sulistyowati S. 2017. Early and late onset preeclampsia: what did really matter?. *Journal of Gynecology and Women's Health* 5(4): 1-3.
- Survei Demografi dan Kesehatan Indonesia (SDKI) 2012. Jakarta: Badan Pusat Statistik.
- Survei Penduduk Antar Sensus (SUPAS) 2015. Jakarta: Badan Pusat Statistik.
- Taebi M, Sadat Z, Saceri F, et al. 2014. Early pregnancy waist-to-hip ratio and risk of preeclampsia: a prospective cohort study. *Hypertens Res* 38(1): 80-83.
- Tal R. 2012. The role of hypoxia and hypoxia inducible factor-1 alpha in preeclampsia pathogenesis. *Biology of Reproduction* 87(6):1-8.
- Taylor BD, Ness RB, Oisen J, et al. 2015. Serum leptin measured in early pregnancy is higher in women with preeclampsia compared to normotensive pregnant women. *Hypertension* 65(3): 594-599.
- Teppa RJ, Ness RB, Crombleholm WR, Roberts JM. 2000. Free leptin is increased in normal pregnancy and further increased in preeclampsia. *Metabolism* 49(8): 1043-1048.
- Tessier DR, Ferraro ZM, Gruslin. 2013. Role of leptin in pregnancy: consequences of maternal obesity. *Plasenta* 34: 205-211.
- Trakovicka A, Moravcikova N, Candrakova K, et al. 2013. Association between LEP G-2548A polymorphism and lipid metabolism. *Acta Tytochea Zootecha* 19: 75-79.
- Tranquilli AL and Landi B. 2010. The origin of preeclampsia: from decidual "hyperoxia" to late hypoxia. *Med Hypotheses* 75(1):38-46.
- Valensise H, Vasapollo B, Gagliardi G, et al. 2008. Early and Late Preeclampsia: two different maternal hemodynamic states in the latent phase of the disease. *Ahajournals* 52: 873-880.
- Van der Merwe JL, Hall DR, Wright C, Schubert P, Grove D. 2010. Are early and late preeclampsia distinct subclasses of the disease-what does the placenta reveal?. *Hypertension in pregnancy* 29: 457-467.
- Van Esch J, Van Heijst A, de Haan A, Van der Heijen O. 2017. Early onset preeclampsia is associated with perinatal mortality and severe neonatal

- morbidity. *The Journal of Maternal-Fetal & Neonatal Medicine* 30 (23): 2789-2794.
- Vasku B, Vasku A, Dostalova Z, Bienert P. 2006. Association of Leptin Genetic Polymorphism -2548G/A with Gestational Diabetes Mellitus. *Genes & Nutrition* 1(2) : 117-124.
- Vasku B, Dostalova Z, Konkova K, Bienert P, Vasku A, Unzetig V. 2008. Is there any link between severe preclampsia and defined polymorphisms in leptin and adiponectin genes?. *J Obstet Gynaecol* 34(8): 858-864.
- Vieira MC, White SL, Patel N, et al. 2017. Prediction of uncomplicated pregnancies in obese women: a prospective multicentre study. *BMC Medicine* 15: 194.
- Vincent NTF, Darmayasa M, Suardika A. 2018. Risk factors of preeclampsia and eclampsia in Sanglah General Hospital from March 2016 to March 2017. *Intisari Sains Medis* 9(3): 131-136.
- Von Dadelszen P, Magee LA, Roberts JM. 2003. Subclassification of preeclampsia. *Hypertens pregnancy* 22(2): 143-148.
- Walker JJ. 2000. Pre-eclampsia. *Lancet* 356 (9237): 1260-1265.
- Wang A, Rana S, Karumanchi SA. 2009. Preeclampsia: the role of angiogenic factors in its pathogenesis. *Physiology (Bethesda)* 24: 147-158.
- Wiedemann A, Vocke F, Fitzgerald JS et al. 2010. Leptin gene (ttc)n microsatellite polymorphism as well as leptin receptor r223q and pparc2 p12a substitutions are not associated with hypertensive disorders in pregnancy. *American Journal of Reproductive Immunology* 63:310-317.
- Wright AF. 2005. Genetic Variation: Polymorphisms and Mutations. *Encyclopedia of life sciences* (10):1038.
- Yang M, Peng S, Wan Z, Fan L, et al. 2016. Relationship between plasma leptin levels, leptin G2548A, leptin receptor Gln223 Arg polymorphism and gestational diabetes mellitus in Chinese population. *Scientific Reports* 6: 23948
- Yeboah FA, Ngala RA, Bawah AT, et al. 2017. Adiposity and hyperleptinemia during the first trimester among pregnant women in preeclampsia. *International Journal of Women Health* 9: 449-454.
- Yusrawati, Habibah RL, Machmud R. 2015. Differences in maternal leptin serum levels between normal pregnancy and preeclampsia. *Indones Biomed* 7(1): 37-42.
- Yusrawati. 2015. Peran Takik Diastolik Arteri Uterina Sebagai Faktor Risiko Perbedaan Resistensi Insulin, ADMA, hs-CRP dan Adiponektin antara

Preeklamsia Awitan Dini dan Preeklamsia Awitan Lambat. *Jurnal Kesehatan Andalas* 5(1).

Zarate A, Saucedo R, Valencia J, Manuel L, Hernandez M. 2014. Early disturbed placentation, hypoxia, and immune alteration and vascular disorder causing preeclampsia. *Arch Med Res* 45(7): 519-524.

Zhang F, Chen Y, Heiman M, Dimarchi R. 2005. Leptin: structure, function and biology. In (Litwack G). *Vitamins and hormones* volume 71. Elsevier Inc: San Diego, CA, pp 345-365.

