References

[1] Ames BN, Cathcart R, Schwiers E, Hochstein P: Uric acid provides an antioxidant defense in humans against oxidant-and radical – caused aging and cancer: a hypothesis. Proc Natl Acad Sci USA 1981; 78: 6853–6862.

[2] Aruoma OI, Halliwell B. Inactivation of alpha-antiproteinase by hydroxyl radicals. The effect of uric acid. FEBS Lett. 1989; 244:76–80.

[3] Bagnati M, Perugini C, Cau C, Bordone R, Albano E, Bellomo G. When and why a water-soluble antioxidant becomes pro-oxidant during copper-induced low-density lipoprotein oxidation: A study using uric acid. Biochem J. 1999; 340:143–152.

[4] Behrens MD, Wagner WM, Krco CJ, Erskine CL, Kalli KR, Krempski J, Gad EA, Disis ML, Knutson KL: The endogenous danger signal, crystalline uric acid, signals for enhanced antibody immunity. Immunobiology 2012; 111(3):1472–1479.

[5] Brosens IA, Robertson WB, Dixon HG. The role of the spiral arteries in the pathogenesis of preeclampsia. Obstet Gynecol Annu. 1972; 1:177–191. [PubMed].

[6] Brosens I, Robertson WB, Dixon HG. The physiological response of the vessels of the placental bed to normal pregnancy. Journal Path Bacteriol. 1967; 93(2):569–579.

[7] Caraway WT. Uric Acid. In: Seligson, D, ed. Standard methods of Clinical Chemistry. New York: Academic Press, 1965:239.

[8] Caniggia I, Taylor CV, Ritchie JW, Lye SJ, Letarte M. Endoglin regulates trophoblast differentiation along the invasive pathway in human placental villous explants. Endocrinology. 1997; 138(11):4977–4988.

[9] Chesley LC. Hypertensive disorders in pregnancy. New York, NY: Appleton-Century- Crofts; 1978.

[10] Christen P, Peackock WC, Christen AE, Wacker WE. Urate oxidase in primate phylogenesis. Eur J Biochem 1970; 12:3–5.

[11] Cohen SB, Kreiser D, Erez et al. Effect of Fetal number on maternal serum uric acid concentration. Am J Perinatol.2002; 19:291 – 296.

[12] Denman T. Introduction to the practice of midwifery. NY: E. Bliss & E White; 1821.

[13] Doehner W, Schoene N, Rauchhaus M et al. Effects of xanthine oxidase inhibition with allopurinol on endothelial function and peripheral blood flow in hyperuricemic patients with chronic heart failure: results from 2 placebo-controlled studies. Circulation.200; 105:2619–2624.

[14] Doherty M. New insights into the epidemiology of gout. Rheumatology 2009; 48:ii2–8.

[15] Eastman NJ, Hellman LM. Williams's obstetrics. 13. New York, NY: Meredith Publishing Company; 1966.

[16] Elosha E, Chike N, Marquetta F. Preeclampsia. Journal of Pregnancy. 2012: 1–7.

[17] Farquharsan CA, Butler R, Hill A et al. Allopurinol improves endothelial dysfunction in chronic heart failure. Circulation. 2002; 106:221–226.

[18] Feig DI, Johnson RJ. Uric acid and cardiovascular risk. N Engl J Med 2009; 360:540–1.

[19] Feichtmeier TV, Wrenn HT. Direct determination of Uric Acid using Uricase. Am J Clin. Pathol. 1995; 25:833.

[20] Forstermann U. Janus-faced role of endothelial NO synthase in vascular disease: Uncoupling of oxygen reduction from NO synthesis and its pharmacological reversal. Biol Chem. 2006; 387:1521–1533.

[21] Friedlander WJ. The history of modern epilepsy: The beginning, 1865–1914. Westport, CT: Greenwood Press; 2001.

[22] Gersch C, Palii SP, Kim KM, Angerhofer A, Johnson RJ, Henderson GN: Inactivation of Nitric Oxide by Uric Acid. Nucleosides Nucleotides Nucleic Acids 2008; 27(8): 967–978.

[23] Goldstone AB, Liochev SI, Fridovich I. Inactivation of copper, zinc superoxide dismutase by H_2O_2: Mechanism of protection. Free Radic Biol Med. 2006; 41:1860–1863.

[24] Gulmezoglu AM, Hofmeyr GJ, Oosthuisen MM. Antioxidants in the treatment of severe preeclampsia: an explanatory randomized controlled trial. Br J Obstet Gynaecol. 1997 104:689–696.

[25] Gerretsen G, Huisjes HJ, Elema JD. Morphological changes of the spiral arteries in the placental bed in relation to pre-eclampsia and fetal growth retardation. British Journal of Obstetrics and Gynaecology. 1981; 88(9):876–81.

[26] Hayashi S, Fujiwara S, Noguchi T. Evolution of urate-degrading enzymes in animal peroxisomes. Cell Biochem Biophys 2000; 32:123–9.

[27] Hediger MA: Kidney function: gateway to a long life? Nature 2002; 417: 393–395

[28] Bainbridge SA, Versen-Hoynck FV, Roberts JM: Uric acid inhibits Placental System A Amino Acid Uptake. Placenta 2009; 30(2): 195–200.

[29] Hediger MA. Kidney function: Gateway to a long life? Nature. 2002; 417:393–395.

[30] Hill AB. The environment and disease: association or causation? Proc R Soc Med. 1965; 58:295–300.

[31] Hladunewich M, Karumanchi SA, Lafayette R. Pathophysiology of the clinical manifestations of preeclampsia. CJASN. 2007; 2:543–549.

[32] Irgens HU, Reisaeter L, Irgens LM et al. Long term mortality of mothers and fathers after preeclampsia: Population based cohort study. BMJ.2001; 323:1213–1217.

[33] Iseki K, Oshiro S, Tozawa M, Iseki C, Ikemiya Y, Takishita S. Significance of hyperuricemia on the early detection of renal failure in a cohort of screened subjects. Hypertension Res. 2001; 24:691–697.

[34] Jerkic M, Rivas-Elena JV, Prieto M, Carron R, Sanz-Rodriguez F, Perez-Barriocanal F, López-Nova JM. Endoglin regulates nitric oxide-dependent vasodilatation. FASEB Journal. 2004; 18(3):609–611.

[35] Johns R. Observations of puerperal convulsions. Dublin Journal of Medical Science. 1843; 24(1):101–115.

[36] Johnson RJ, Kang DH, Feig D et al. Is there a pathogenetic role for uric acid in hypertension and cardiovascular and renal disease? Hypertension 2003; 41:1183–90.

[37] Johnson RJ, Feig DI, Kang DH, Herrera-Acosta J. Resurrection of uric acid as a causal risk factor in essential hypertension. Hypertension. 2005; 45:18–20.

[38] Jhonson RJ, Titte S, Cade JR, Rideout BA, Oliver WJ. Uric acid, evolution and primitive cultures. Semin Nephrol 2005; 25:3–8.

[39] Kanabrocki EL, Third JL, Ryan MD et al (2000): Circadian relationship of serum uric acid and nitric oxide. JAMA. 2000; 283:2240–2241.

[40] Kand'ar P, Zakova P, Muzakova V. Monitoring of antioxidant antioxidant properties properties of uric uric acid acid in humans humans for a consideration consideration measuring measuring of levels levels of allantoin allantoin in plasma plasma by liquid liquid chromatographychromatography. Clin Chim Acta. 2006; 365:249–256.

[41] Khosla UM, Zharikov S, Finch JL, Nakagawa T, Roncal C, Mu W, Krotoya K, Block ER, Prabhakar S, Johnson RJ: Hyperuracaemia induces endothelial dysfunction. Kidney Int 2005; 67: 1739–1742.

[42] Kittridge KJ, Willson RL. Uric acid substantially enhances the free radical-induced inactivation of alcohol dehydrogenase. FEBS Lett. 1984; 170:162–164.

[43] Kong TY, De Wolf F, Robertson WB, Brosens I. Inadequate maternal vascular response to placentation in pregnancies complicated by pre-eclampsia and by small-for-gestational age infants. British Journal of Obstetrics and Gynaecology. 1986; 93(10):1049–1059.

[44] Kuzkaya N, Weissmann N, Harrison DF, Dikalov S: Interactions of peroxynitrite with uric acid in the presence of ascorbate and thiols: implications for uncoupling endothelial nitric oxide synthase. Biochem Pharmacol 2005; 70: 345–354.

[45] Kutzing MK, Firestein BL. Altered uric acid levels and disease states. J Pharmacol Exp Ther 2008; 324:1–7.

[46] Leeman L, Fontaine P. Hypertensive disorders of pregnancy. American Family Physician. 2008; 78(1):93–100.

[47] Lee FI, Loeffler FE (1962): Gout and Pregnancy. J Obstt Gynaecol Br Emp 69: 299–304.

[48] Lueck J, Brewer JI, Aladjem S, Novotny M. Observation of an organism found in patients with trophoblastic disease and in patients with toxemia of pregnancy. American Journal of Obstetrics and Gynecology. 1983; 145(1):15–26.

[49] Mador ES, Mutihir JY, Ogunranti JO (2012). Fetal Head Circumference as an Anthropometric Index. In: Preedy VR (editor). Handbook of Anthropometry: Physical Measures of Human Form in Health and Disease. UK, Springer; 2012: 477–516.

[50] Mador, E. S. In: Ultrasonic Fetal Biometry: Anthropometric Reference Values &

Predictive Formulae of Fetal Parameters. LAP LAMBERT Academic publishing GmbH & Co. KG, Heinrich-Bocking-str.6-8, 66121 Sacrbruken, Germany: 2012.

[51] Mador ES, Pam IC, Isichei CO. Uric Acid: A hypothetical cause of preeclampsia – eclampsia. Nig Med J. 2013; 54(5): 362–364.

[52] Masuo K, Kawaguchi H, Mikani H, Ogihara T, Tuck ML. Serum uric acid and plasma norepinephrine concentrations predict subsequent weight gain and blood pressure elevation. Hypertension. 2003; 42:474–480.

[53] Mauriceau F. In: The diseases of women with child, and in childbed: As also, the best means of helping them in natural and unnatural labours…. To which is prefix'd an exact description of the parts of generation in women…The fourth edition corrected, and augmented with several new figures. Chamberlen H, translator. London: 1710. (Original work published 1668).

[54] McMillen S. Eclampsia. In: Kiple KF, editor. The Cambridge historical dictionary of disease. New York, NY: Cambridge University Press; 2003. pp. 110–112.

[55] Nakagawa T, Hu H, Zharikov S, Tuttle KR, Ahort RA, Glushakova O, Ouyang X, Feig DI, Block ER, Herrera-Acosta J, Patel JM, Johnson RJ. Uric acid a causal factor for fructose-induced metabolic syndrome. Am J Physiol Renal Physiol. 2006; 290:F625–F631.

[56] Nawal MN. An Introduction to Maternal Mortality. Rev Obstet Gynecol.2008; 1(2):77–81.

[57] Oda M, Satta Y, Takenaka O, Takahata N. Loss of urate oxidase activity in hominoids and its evolutionary implications. Mol Biol Evol 2002; 19:640–53.

[58] Papoutsis DV, Irwin RL, Curry JJ, Zuspan FP. Parasitic etiology for preeclampsia: Fact or artifact? American Journal of Obstetrics and Gynecology. 1983; 147(8):977–979.

[59] Pennington KA, Schlitt JM, Jackson DL, Schulz LC, Schust DJ. Preeclampsia: multiple approaches for a multifactorial disease. Dis Model Mech. 2012; 5(1):9–18.

[60] Rao A K, Daniels K, El-Sayed Y. Y, Moshesh M. K, and Caughey A. B (2006): "Perinatal outcomes among Asian American and Pacific Islander women," American Journal of Obstetrics and Gynecology. 2006; 195: 834–838.

[61] Richette P, Bardin T. Gout. Lancet. 2010; 375:318–28.

[62] Riches PL, Wright AF, Ralston SH. Recent insights into the pathogenesis of hyperuricemia and gout. Hum Mol Genet. 2009; 18:R177–84.

[63] Roberts JM, Taylor RN, Musci TJ, Rodgers GM, Hubel CA, McLaughlin MK: Preeclampsia: An endothelial cell disorder. American Journal of Obstetrics & Gynecology. 1989; 161(5):1200–1204.

[64] Robinson KM, Morre JT, Beckman JS, Triuret: A novel product of peroxynitrite-mediated oxidation of urate. Arch Bioch Biophys. 2004; 423: 213–217.

[65] Roberts JM, Hubel CA. The two stage model of preeclampsia: Variations on the theme. Placenta. 2009; 23:S32–S37.

[66] Roberts JM, Gammill HS. Preeclampsia: Recent insights. Hypertension. 2005; 46:1243–1249.

[67] Saugstod OD. Hypoxanthine as measurement of hypoxia. Paediatr Res. 1975; 9:158–161.

[68] Sanguinetti SM, Batthyany C, Trostchansky A, Botti H, Lopez GI, Wikinski RLW, Rubbo H, Schreier LE. Nitric oxide inhibits prooxidant actions of uric acid during copper-mediated LDL oxidation. Arch Biochem Biophys. 2004; 423:302–308.

[69] Shepard, M., and Filly, R. A. A standard plane for biparietal diameter measurement. Journal of Ultrasound in medicine. 1982; 1:145–150.

[70] Sibai BM, Spinnato JA. Hydatoxi lualba: Artifact produced by sulfation. American Journal of Obstetrics and Gynecology. 1983; 147(7):854.

[71] Simmonds HA, Stutchbury JH, Webster DR et al. Pregnancy and Xanthinuria: Demonstration of Fetal Uric Acid Production? J Inherit Metab Dis. 1984 7: 77–79.

[72] Sinclair EB, Johnston G. Practical midwifery: Comprising an account of 13,748 deliveries which occurred in the Dublin Lying-in Hospital, during a period of seven years, commencing November, 1847. Dublin, Ireland: The University Press; 1858.

[73] Smith WT. Parturition and the principles and practice of obstetrics. Philadelphia, PA: Lea & Blanchard; 1849.

[74] Speert H. Obstetric and gynecologic milestones: Essays in eponymy. NY: The Macmillan Company; 1958.

[75] Temkin O. The falling sickness: A history of epilepsy from the Greeks to the beginnings of modern neurology. Baltimore: MD: The Johns Hopkins Press; 1971. (Rev. ed.)

[76] Tietz N. Clinical guide to Laboratory tests. Philadelphia: WB Saunders, 1995.

[77] Thomas H. Classical contributions to obstetrics and gynecology. Baltimore, MD: Charles C Thomas; 1935.

[78] Tomita M, Mizuno S, Yamanaka H, Hosoda Y, Sakuma K, Matuoka Y, Odaka M, Yamaguchi M, Yosida H, Morisawa H, Murayama T. Does hyperuricemia affect mortality? A prospective cohort study of Japanese male workers. J Epidemiol. 2000; 10:403–409.

[79] Toporsian M, Gros R, Kabir MG, Vera S, Govindaraju K, Eidelman DH, et al. A role for endoglin in coupling eNOS activity and regulating vascular tone revealed in hereditary hemorrhagic telangiectasia. Circ Res. 2005; 96(6):684–692.

[80] Watanabe S, Kang DH, Feng L et al. Uric acid, hominoid evolution and the pathogenesis of salt-sensitivity. Hypertension 2002; 40:355–60.

[81] World Health Organization (WHO). The World Health Report 2005: Make Every Mother and Child Count. Geneva, Switzerland: WHO; 2005.

[82] Wu X, Muzny DM, Lee CC, Caskey CT. Two independent mutational events in the loss of urate oxidase during hominoid evolution. J Mol Evol. 1992; 34:78–84.

[83] Wu X, Wakamiya M, Vaishnav S et al. Hyperuricemia and urate nephropathy in urate oxidase-deficient mice. Proc Natl Acad Sci USA 1994; 91:742–6.

[84] Wu X, Muzny DM, Lee CC, Caskey CT. Two idependent mutational events in the loss of urate oxides during hominoid evolution. J Mol Evol. 1992; 34:78–84.

It is proposed that the damaging factor released into maternatal circulation by the ischaemic placenta is uric acid produced from genetic material of cells of embryonic/fetal origin.

Fetus
Uric acid
Theory
Preeclampsia
Aetiology

ISBN 978-1-940366-39-5
9 781940 366395 >
Price: US $80

To order additional copies of this book, please contact:
Science Publishing Group
book@sciencepublishinggroup.com
www.sciencepublishinggroup.com