ANDROGEN EXCESS AND PCOS SOCIETY

Quarterly Review for Androgen Excess-PCOS Society
October 1st – December 31st, 2012

Contents

AEPCOS-related Publication

1. Roe AH, Prochaska E, Smith M, Sammel M, Dokras A. Using the Androgen Excess-PCOS Society Criteria to Diagnose Polycystic Ovary Syndrome and the Risk of Metabolic Syndrome in Adolescents. J Pediatr. 2012 Dec 19. PubMed PMID: 23260096.

The diagnosis of PCOS in adolescent girls is not easy and is still controversial. The issue: adolescent girls can mimic the diagnostic criteria for PCOS without maturing into a PCOS phenotype. Adolescents have naturally occurring clinical signs of high androgen levels, intermittent/absent menstrual cycles and polycystic ovaries as they transition to reproductive maturity. In this paper, Roe and colleagues use AEPCOS criteria to diagnose PCOS in 148 adolescents in the USA (mostly Caucasian) and examined the incidence of metabolic syndrome (MS) in these girls compared to 57 controls (recruited adolescents who failed diagnosis for PCOS). All girls were recruited from adolescents referred to a specialty clinic, so this referral bias likely contributes to the high incidence of PCOS. Only girls with >2 years postmenarche were included as having intermittent/absent cycles (≤ 9 per year) and polycystic ovaries were identified from at least one ovary with a volume ≥ 10 cm^3 and not antral follicle counts. Girls were classified with MS if they showed 3 of the following 5 modified Cook criteria: body mass index >90th percentile, serum triglycerides ≥ 150 mg/dL, serum high-density lipoprotein cholesterol (HDL-C) ≤ 40 mg/dL, blood pressure at ≥ 90th percentile for age (or taking antihypertensives), and fasting plasma glucose ≥ 100 mg/dL. Of the 205 adolescents included in the study, ~66% were diagnosed with PCOS by AEPCOS criteria, with intermittent/absent cycles as the most frequent criterion. Almost all (~64%) adolescents identified as PCOS had at least one risk factor for MS, compared to about half that incidence in controls, and ~11% of girls identified as PCOS were classified as MS compared to ~2% of controls. These data, the authors suggest, should encourage early diagnosis of PCOS during adolescence to enable timely metabolic risk assessment and early intervention to diminish onset of cardiovascular disease.

List of October – December, 2012 Quarterly Publications

Brief overviews of selected publications

Congenital Adrenal Hyperplasia and Disorders of Steroidogenesis

Insulin resistance

List of Publications

Congenital Adrenal Hyperplasia and Disorders of Steroidogenesis

Bachelot A, Chakhtoura Z, Plu-Bureau G, Coudert M, Coussieu C, Badachi Y, Dulon J, Charbit B, Touraine P; CAHLH study group. Influence of hormonal control on LH pulsatility and secretion in women with classical congenital adrenal hyperplasia. Eur J Endocrinol. 2012 Oct;167(4):499-505. PubMed PMID: 22893695.

Carvalho B, Pereira M, Marques CJ, Carvalho D, Leão M, Oliveira JP, Barros A, Carvalho F. Comprehensive genetic analysis and structural characterization of CYP21A2 mutations in CAH patients. Exp Clin Endocrinol Diabetes. 2012 Oct;120(9):535-9

Chen W, Xu Z, Nishitani M, Van Ryzin C, McDonnell NB, Merke DP. Complement component 4 copy number variation and CYP21A2 genotype associations in patients with congenital adrenal hyperplasia due to 21-hydroxylase deficiency. Hum Genet. 2012 Dec;131(12):1889-94

Crocker MK, Barak S, Millo CM, Beall SA, Niyyati M, Chang R, Avila NA, Van Ryzin C, Segars J, Quezado M, Merke DP. Use of PET/CT with cosyntropin stimulation to identify and localize adrenal rest tissue following adrenalectomy in a woman with congenital adrenal hyperplasia. J Clin Endocrinol Metab. 2012 Nov;

Finkielstain GP, Kim MS, Sinaii N, Nishitani M, Van Ryzin C, Hill SC, Reynolds JC, Hanna RM, Merke DP. Clinical characteristics of a cohort of 244 patients with congenital adrenal hyperplasia. J Clin Endocrinol Metab. 2012 Dec;97(12):4429-38

Godbout A, Tejedor I, Malivoir S, Polak M, Touraine P. Transition from pediatric to adult healthcare: assessment of specific needs of patients with chronic endocrine conditions. Horm Res Paediatr. 2012;78(4):247-55

Guaragna-Filho G, Castro CC, Carvalho RR, Coeli FB, Ferraz LF, Petroli RJ, Mello MP, Sewaybricker LE, Lemos-Marini SH, D'Souza-Li LF, Miranda ML, Maciel-Guerra AT, Guerra-Junior G. 46,XX DSD and Antley-Bixler syndrome due to novel mutations in the cytochrome P450 oxidoreductase gene. Arq Bras Endocrinol Metabol. 2012 Nov;56(8):578-85

Javed A, Lteif A, Kumar S. Update on treatment strategies for optimization of final adult height in children with congenital adrenal hyperplasia. Pediatr Endocrinol Rev. 2012 Nov;10(1):164-73

Kamrath C, Hartmann MF, Remer T, Wudy SA. The activities of 5α-reductase and 17,20-lyase determine the direction through androgen synthesis pathways in patients with 21-hydroxylase deficiency. Steroids. 2012 Nov;77(13):1391-7.

Kim MS, Ryabets-Lienhard A, Geffner ME. Management of congenital adrenal hyperplasia in childhood. Curr Opin Endocrinol Diabetes Obes. 2012 Dec;19(6):483-8

Mattila AK, Fagerholm R, Santtila P, Miettinen PJ, Taskinen S. Gender identity and gender role orientation in female assigned patients with disorders of sex development. J Urol. 2012 Nov;188(5):1930-4

Mnif MF, Kamoun M, Mnif F, Charfi N, Naceur BB, Kallel N, Rekik N, Mnif Z, Sfar MH, Sfar MT, Hachicha M, Abid M. Metabolic profile and cardiovascular risk factors in adult patients with congenital adrenal hyperplasia due to 21-hydroxylase deficiency. Indian J Endocrinol Metab. 2012 Nov;16(6):939-46

Mnif MF, Kamoun M, Mnif F, Charfi N, Kallel N, Ben Naceur B, Rekik N, Mnif Z, Sfar MH, Sfar MT, Hachicha M, Keskes LA, Abid M. Long-term outcome of patients with congenital adrenal hyperplasia due to 21-hydroxylase deficiency. Am J Med Sci. 2012 Nov;344(5):363-73

Monticone S, Auchus RJ, Rainey WE. Adrenal disorders in pregnancy. Nat Rev Endocrinol. 2012 Nov;8(11):668-78

New MI, Abraham M, Yuen T, Lekarev O.An update on prenatal diagnosis and treatment of congenital adrenal hyperplasia. Semin Reprod Med. 2012 Oct;30(5):396-9.

Poulain M, Frydman N, Duquenne C, N'Tumba-Byn T, Benachi A, Habert R, Rouiller-Fabre V, Livera G. Dexamethasone induces germ cell apoptosis in the human fetal ovary. J Clin Endocrinol Metab. 2012 Oct;97(10):E1890-7

Sarafoglou K, Banks K, Gaviglio A, Hietala A, McCann M, Thomas W. Comparison of one-tier and two-tier newborn screening metrics for congenital adrenal hyperplasia. Pediatrics. 2012 Nov;130(5):e1261-8

Sharma S, Gupta DK. Male genitoplasty for 46 XX congenital adrenal hyperplasia patients presenting late and reared as males. Indian J Endocrinol Metab. 2012 Nov;16(6):935-8.

White PC, Bachega TA. Congenital adrenal hyperplasia due to 21 hydroxylase deficiency: from birth to adulthood. Semin Reprod Med. 2012 Oct;30(5):400-9

Wilson JD, Rivarola MA, Mendonca BB, Warne GL, Josso N, Drop SL, Grumbach MM.Advice on the management of ambiguous genitalia to a young endocrinologist from experienced clinicians. Semin Reprod Med. 2012 Oct;30(5):339-50

Witchel SF. Management of CAH during pregnancy: optimizing outcomes. Curr Opin Endocrinol Diabetes Obes. 2012 Dec;19(6):489-96

Witchel SF, Miller WL. Prenatal treatment of congenital adrenal hyperplasia-not standard of care. J Genet Couns. 2012 Oct;21(5):615-24

Insulin resistance

Alemany M.Relationship between energy dense diets and white adipose tissue inflammation in metabolic syndrome. Nutr Res. 2013 Jan;33(1):1-11. doi: 10.1016/j.nutres.2012.11.013

Bose KS, Gupta SK, Singh S. Is serum retinol binding protein-4: A predictor for diabetes in genetically high risk population? J Res Med Sci. 2012 Nov;17(11):1015-9

Habegger KM, Matzke D, Ottaway N, Hembree J, Holland J, Raver C, Mansfeld J, Müller TD, Perez-Tilve D, Pfluger PT, Lee SJ, Diaz-Meco M, Moscat J, Leitges M, Tschöp MH, Hofmann SM. Role of adipose and hepatic atypical protein kinase C lambda (PKCλ) in the development of obesity and glucose intolerance. Adipocyte. 2012 Oct 1;1(4):203-214

Han MS, Jung DY, Morel C, Lakhani SA, Kim JK, Flavell RA, Davis RJ.JNK expression by macrophages promotes obesity-induced insulin resistance and inflammation. Science. 2013 Jan 11;339(6116):218-22. doi: 10.1126/science.1227568. Epub 2012 Dec 6.

Lucey AJ, Paschos GK, Thorsdottir I, Martínéz JA, Cashman KD, Kiely M. Young overweight and obese women with lower circulating osteocalcin concentrations exhibit higher insulin resistance and concentrations of C-reactive protein. Nutr Res. 2013 Jan;33(1):67-75. doi: 10.1016/j.nutres.2012.11.011.

McLaughlin T, Lamendola C, Coghlan N, Liu TC, Lerner K, Sherman A, Cushman SW. Subcutaneous adipose cell size and distribution: Relationship to insulin resistance and body fat. Obesity (Silver Spring). 2012 Nov 29:NA. doi: 10.1002/oby.20209.

Mori K, Emoto M, Motoyama K, Lee E, Yamada S, Morioka T, Imanishi Y, Shoji T, Inaba M. Undercarboxylated osteocalcin does not correlate with insulin resistance as assessed by euglycemic hyperinsulinemic clamp technique in patients with type 2 diabetes mellitus. Diabetol Metab Syndr. 2012 Dec 18;4(1):53

Stanford KI, Middelbeek RJ, Townsend KL, An D, Nygaard EB, Hitchcox KM, Markan KR, Nakano K, Hirshman MF, Tseng YH, Goodyear LJ.Brown adipose tissue regulates glucose homeostasis and insulin sensitivity. J Clin Invest. 2013 Jan 2;123(1):215-23. doi: 10.1172/JCI62308. Epub 2012 Dec 10

Vella CA, Burgos X, Ellis CJ, Zubia RY, Ontiveros D, Reyes H, Lozano C. Associations of insulin resistance with cardiovascular risk factors and inflammatory cytokines in normal-weight Hispanic women. Diabetes Care. 2013 May;36(5):1377-83.

Vogt MC, Brüning JC. CNS insulin signaling in the control of energy homeostasis and glucose metabolism - from embryo to old age. Trends Endocrinol Metab. 2013 Feb;24(2):76-84. doi: 10.1016/j.tem.2012.11.004. Epub 2012 Dec 19

Xu L, Li M, Yin J, Cheng H, Yu M, Zhao X, Xiao X, Mi J. Change of Body Composition and Adipokines and Their Relationship with Insulin Resistance across Pubertal Development in Obese and Nonobese Chinese Children: The BCAMS Study. Int J Endocrinol. 2012;2012:389108. doi: 10.1155/2012/389108

Polycystic ovary syndrome (PCOS)

PCOS – Adolescence

Geier LM, Bekx MT, Connor EL. Factors contributing to initial weight loss among adolescents with polycystic ovary syndrome. J Pediatr Adolesc Gynecol. 2012 Dec;25(6):367-70. PubMed PMID: 23089571.

Kale-Gurbuz T, Akhan SE, Bastu E, Telci A, Iyibozkurt AC, Topuz S. Adiponectin, Leptin and Ghrelin Levels in Obese Adolescent Girls with Polycystic Ovary Syndrome. J Pediatr Adolesc Gynecol. 2012 Nov 14. PubMed PMID: 23158749.

Li L, Chen X, He Z, Zhao X, Huang L, Yang D. Clinical and metabolic features of polycystic ovary syndrome among Chinese adolescents. J Pediatr Adolesc Gynecol. 2012 Dec;25(6):390-5. PubMed PMID: 23089573.

Nandalike K, Agarwal C, Strauss T, Coupey SM, Isasi CR, Sin S, Arens R. Sleep and cardiometabolic function in obese adolescent girls with polycystic ovary syndrome. Sleep Med. 2012 Dec;13(10):1307-12. PubMed PMID: 22921588; PubMed Central PMCID: PMC3509263.

Pinola P, Lashen H, Bloigu A, Puukka K, Ulmanen M, Ruokonen A, Martikainen H, Pouta A, Franks S, Hartikainen AL, Järvelin MR, Morin-Papunen L. Menstrual disorders in adolescence: a marker for hyperandrogenaemia and increased metabolic risks in later life? Finnish general population-based birth cohort study. Hum Reprod. 2012 Nov;27(11):3279-86. PubMed PMID: 22933528.

Rackow BW. Polycystic ovary syndrome in adolescents. Curr Opin Obstet Gynecol. 2012 Oct;24(5):281-7. PubMed PMID: 22781076.

Roe AH, Prochaska E, Smith M, Sammel M, Dokras A. Using the Androgen Excess-PCOS Society Criteria to Diagnose Polycystic Ovary Syndrome and the Risk of Metabolic Syndrome in Adolescents. J Pediatr. 2012 Dec 19. PubMed PMID: 23260096.

Trottier A, Battista MC, Geller DH, Moreau B, Carpentier AC, Simoneau-Roy J, Baillargeon JP. Adipose tissue insulin resistance in peripubertal girls with first-degree family history of polycystic ovary syndrome. Fertil Steril. 2012 Dec;98(6):1627-34. PubMed PMID: 22985947.

Vilmann LS, Thisted E, Baker JL, Holm JC. Development of Obesity and Polycystic Ovary Syndrome in Adolescents. Horm Res Paediatr. 2012 Nov 28. PubMed PMID: 23208318.

PCOS – Dermatology and Body Hair Complications

Colonna L, Pacifico V, Lello S, Sorge R, Raskovic D, Primavera G. Skin improvement with two different oestroprogestins in patients affected by acne and polycystic ovary syndrome: clinical and instrumental evaluation. J Eur Acad Dermatol Venereol. 2012 Nov;26(11):1364-71. PubMed PMID: 22011217.

Del Prete M, Mauriello MC, Faggiano A, Di Somma C, Monfrecola G, Fabbrocini G, Colao A. Insulin resistance and acne: a new risk factor for men? Endocrine. 2012 Dec;42(3):555-60. PubMed PMID: 22447309.

Galobardes B, Patel S, Henderson J, Jeffreys M, Smith GD. The association between irregular menstruations and acne with asthma and atopy phenotypes. Am J Epidemiol. 2012 Oct 15;176(8):733-7. PubMed PMID: 23028012; PubMed Central PMCID: PMC3472614.

Kamangar F, Shinkai K. Acne in the adult female patient: a practical approach. Int J Dermatol. 2012 Oct;51(10):1162-74. PubMed PMID: 22994662.

Karaca Z, Acmaz B, Açmaz G, Tanriverdi F, Unluhizarci K, Aribas S, Sahin Y, Kelestimur F. Routine screening for Cushing's syndrome is not required in patients presenting with hirsutism. Eur J Endocrinol. 2012 Dec 7. PubMed PMID: 23221034.

Moro F, De Simone C, Morciano A, Tropea A, Sagnella F, Palla C, Scarinci E, Teti A, Caldarola G, D'Agostino M, Mancuso S, Lanzone A, Apa R. Psoriatic patients have an increased risk of polycystic ovary syndrome: results of a cross-sectional analysis. Fertil Steril. 2012 Nov 16. PubMed PMID: 23158933.

Wang L, Li S, Zhao A, Tao T, Mao X, Zhang P, Liu W. The expression of sex steroid synthesis and inactivation enzymes in subcutaneous adipose tissue of PCOS patients. J Steroid Biochem Mol Biol. 2012 Oct;132(1-2):120-6. PubMed PMID: 22381227.

PCOS – Endocrine Disrupters

None.

PCOS – Etiology and Animal Models

Cruz G, Barra R, González D, Sotomayor-Zárate R, Lara HE. Temporal window in which exposure to estradiol permanently modifies ovarian function causing polycystic ovary morphology in rats. Fertil Steril. 2012 Nov;98(5):1283-90. PubMed PMID: 22854013.

Marino JS, Iler J, Dowling AR, Chua S, Bruning JC, Coppari R, Hill JW. Adipocyte dysfunction in a mouse model of polycystic ovary syndrome (PCOS): evidence of adipocyte hypertrophy and tissue-specific inflammation. PLoS One. 2012;7(10):e48643. PubMed PMID: 23119079; PubMed Central PMCID: PMC3485364.

Masszi G, Buday A, Novak A, Horvath EM, Tarszabo R, Sara L, Revesz C, Benko R, Nadasy GL, Benyó Z, Hamar P, Varbiro S. Altered insulin-induced relaxation of aortic rings in a dihydrotestosterone-induced rodent model of polycystic ovary syndrome. Fertil Steril. 2012 Oct 9. PubMed PMID: 23058684.

McNeilly AS, Colin Duncan W. Rodent models of polycystic ovary syndrome. Mol Cell Endocrinol. 2012 Oct 23. PubMed PMID: 23098676.

Ortega I, Wong DH, Villanueva JA, Cress AB, Sokalska A, Stanley SD, Duleba AJ. Effects of resveratrol on growth and function of rat ovarian granulosa cells. Fertil Steril. 2012 Dec;98(6):1563-73. PubMed PMID: 22959450; PubMed Central PMCID: PMC3513511.

Padmanabhan V, Veiga-Lopez A. Sheep models of polycystic ovary syndrome phenotype. Mol Cell Endocrinol. 2012 Oct 16. PubMed PMID: 23084976.

Park JH, Choi TS. Polycystic ovary syndrome (PCOS)-like phenotypes in the d-galactose-induced aging mouse model. Biochem Biophys Res Commun. 2012 Nov 2;427(4):701-4. PubMed PMID: 23022527.

Sang Q, Zhang S, Zou S, Wang H, Feng R, Li Q, Jin L, He L, Xing Q, Wang L. Quantitative analysis of follistatin (FST) promoter methylation in peripheral blood of patients with polycystic ovary syndrome. Reprod Biomed Online. 2012 Oct 23. PubMed PMID: 23265961.

Sara L, Nadasy GL, Antal P, Monori-Kiss A, Szekeres M, Masszi G, Monos E, Varbiro S. Pharmacological reactivity of resistance vessels in a rat PCOS model - vascular effects of parallel vitamin D(3) treatment. Gynecol Endocrinol. 2012 Dec;28(12):961-4. PubMed PMID: 22621463.

Yaba A, Demir N. The mechanism of mTOR (mammalian target of rapamycin) in a mouse model of polycystic ovary syndrome (PCOS). J Ovarian Res. 2012 Nov 27;5(1):38. PubMed PMID: 23185989; PubMed Central PMCID: PMC3538528.

PCOS – General Health Concerns

Awwad J, Ghazeeri G, Toth T, Hannoun A, Abdallah MA, Farra C. Fever in women may interfere with follicular development during controlled ovarian stimulation. Int J Hyperthermia. 2012;28(8):742-6. PubMed PMID: 23072616.

Azziz R, Chang WY, Stanczyk FZ, Woods K. Effect of bilateral oophorectomy on adrenocortical function in women with polycystic ovary syndrome. Fertil Steril. 2012 Oct 31. PubMed PMID: 23122827.

Fanta M. Is polycystic ovary syndrome, a state of relative estrogen excess, a real risk factor for estrogen-dependant malignancies? Gynecol Endocrinol. 2013 Feb;29(2):145-7. PubMed PMID: 23127146.

Gonen T, Celik C, Oznur M, Abali R, Gonen KA, Horozoglu F, Aksu E, Keskinbora KH. Tear Osmolarity and Ocular Surface Changes in Patient with Polycystic Ovary Syndrome. Curr Eye Res. 2012 Dec 18. PubMed PMID: 23249394.

González F. Adrenal dysfunction in polycystic ovary syndrome: has it been lost to follow-up? Fertil Steril. 2012 Nov 16. PubMed PMID: 23158931.

Ozçaka O, Ceyhan BÖ, Akcali A, Biçakci N, Lappin DF, Buduneli N. Is there an interaction between polycystic ovary syndrome and gingival inflammation? J Periodontol. 2012 Dec;83(12):1529-37. PubMed PMID: 22509751.

Zayed A, Nabil H, State O, Badawy A. Subfertility in women with familial Mediterranean fever. J Obstet Gynaecol Res. 2012 Oct;38(10):1240-4. PubMed PMID: 22563801.

PCOS – Genetics

Chan Y, Zi F, Wu X, Ma L, Meng Y, Chen J, Wang S, Luo S, Luo Y, Tang W. Note of clarification of data in the meta-analysis of methylenetetrahydrofolate reductase C677T polymorphisms in polycystic ovary syndrome. Mol Hum Reprod. 2012 Oct;18(10):514-5. PubMed PMID: 22707671.

Cui L, Zhao H, Zhang B, Qu Z, Liu J, Liang X, Zhao X, Zhao J, Sun Y, Wang P, Li T, Shi Y, Chen ZJ. Genotype-phenotype correlations of PCOS susceptibility SNPs identified by GWAS in a large cohort of Han Chinese women. Hum Reprod. 2012 Dec 2. PubMed PMID: 23208300.

Deepika ML, Reddy KR, Rani VU, Balakrishna N, Latha KP, Jahan P. Do ACE I/D gene polymorphism serve as a predictive marker for age at onset in PCOS? J Assist Reprod Genet. 2012 Dec 12. PubMed PMID: 23232975.

George P, George T, Panagiotis C, Margarita V, Maria G, Efthimios D, George C, George M. PON1-108 TT and PON1-192 RR genotypes are more frequently encountered in Greek PCOS than non-PCOS women, and are associated with hyperandrogenemia. Clin Endocrinol (Oxf). 2012 Dec 29. PubMed PMID: 23278234.

Hatziagelaki E, Wagner R, Kantartzis K, Heni M, Linder K, Ketterer C, Machicao F, Stefan N, Staiger H, Häring HU, Fritsche A. Insulin resistant phenotype of polycystic ovary syndrome does not seem to be caused by variation in FTO. Horm Metab Res. 2012 Oct;44(11):810-3. PubMed PMID: 22847851.

Hwang JY, Lee EJ, Jin Go M, Sung YA, Lee HJ, Heon Kwak S, Jang HC, Soo Park K, Lee HJ, Byul Jang H, Song J, Park KH, Kim HL, Cho MC, Lee JY. Genome-wide association study identifies GYS2 as a novel genetic factor for polycystic ovary syndrome through obesity-related condition. J Hum Genet. 2012 Oct;57(10):660-4. PubMed PMID: 22951595.

Idali F, Zareii S, Mohammad-Zadeh A, Reihany-Sabet F, Akbarzadeh-Pasha Z, Khorram-Khorshid HR, Zarnani AH, Jeddi-Tehrani M. Plasminogen activator inhibitor 1 and methylenetetrahydrofolate reductase gene mutations in iranian women with polycystic ovary syndrome. Am J Reprod Immunol. 2012 Nov;68(5):400-7. PubMed PMID: 22882325.

Jia H, Yu L, Guo X, Gao W, Jiang Z. Associations of adiponectin gene polymorphisms with polycystic ovary syndrome: a meta-analysis. Endocrine. 2012 Oct;42(2):299-306. PubMed PMID: 22270872.

Knebel B, Lehr S, Janssen OE, Hahn S, Nitzgen U, Jacob S, Haas J, Muller-Wieland D, Kotzka J. Genetic variants in central metabolic genes influence some but not all relations of inflammatory markers in a collective with polycystic ovary syndrome. Arch Physiol Biochem. 2012 Oct;118(4):219-29. PubMed PMID: 22738153.

Kosova G, Urbanek M. Genetics of the polycystic ovary syndrome. Mol Cell Endocrinol. 2012 Oct 16. PubMed PMID: 23079471.

Lin LH, Baracat MC, Maciel GA, Soares JM Jr, Baracat EC. Androgen receptor gene polymorphism and polycystic ovary syndrome. Int J Gynaecol Obstet. 2012 Nov 23. PubMed PMID: 23182796.

Lin MW, Tsai SJ, Chou PY, Huang MF, Sun HS, Wu MH. Vitamin D receptor 1a promotor -1521 G/C and -1012 A/G polymorphisms in polycystic ovary syndrome. Taiwan J Obstet Gynecol. 2012 Dec;51(4):565-71. PubMed PMID: 23276559.

Martínez-García MÁ, Gambineri A, Alpañés M, Sanchón R, Pasquali R, Escobar-Morreale HF. Common variants in the sex hormone-binding globulin gene (SHBG) and polycystic ovary syndrome (PCOS) in Mediterranean women. Hum Reprod. 2012 Dec;27(12):3569-76. PubMed PMID: 23001781.

Mutharasan P, Galdones E, Peñalver Bernabé B, Garcia OA, Jafari N, Shea LD, Woodruff TK, Legro RS, Dunaif A, Urbanek M. Evidence for chromosome 2p16.3 polycystic ovary syndrome susceptibility locus in affected women of European ancestry. J Clin Endocrinol Metab. 2013 Jan;98(1):E185-90. PubMed PMID: 23118426.

Sasidevi A, Vellanki P, Kunselman AR, Raja-Khan N, Dunaif A, Legro RS. Familial aggregation of circulating c-reactive protein in polycystic ovary syndrome. Hum Reprod. 2012 Dec 20. PubMed PMID: 23257395.

Tang ST, Wang CJ, Tang HQ, Peng WJ, Wang YM, Zhang Q. Association of Pro12Ala polymorphism in peroxisome proliferator-activated receptor gamma with polycystic ovary syndrome: a meta-analysis. Mol Biol Rep. 2012 Oct;39(10):9649-60. PubMed PMID: 22729915.

Tao T, Li S, Zhao A, Zhang Y, Liu W. Expression of the CD11c gene in subcutaneous adipose tissue is associated with cytokine level and insulin resistance in women with polycystic ovary syndrome. Eur J Endocrinol. 2012 Nov;167(5):705-13. PubMed PMID: 22945299.

Wang R, Goodarzi MO, Xiong T, Wang D, Azziz R, Zhang H. Negative association between androgen receptor gene CAG repeat polymorphism and polycystic ovary syndrome? A systematic review and meta-analysis. Mol Hum Reprod. 2012 Oct;18(10):498-509. PubMed PMID: 22695532; PubMed Central PMCID: PMC3457706.

Wang Z, Li T, Zhang W, You L, Zhao Y, Xia M, Zhao H, Chen ZJ. Variants in DENND1A and LHCGR are associated with endometrioid adenocarcinoma. Gynecol Oncol. 2012 Nov;127(2):403-5. PubMed PMID: 22902918.

Wojciechowski P, Lipowska A, Rys P, Ewens KG, Franks S, Tan S, Lerchbaum E, Vcelak J, Attaoua R, Straczkowski M, Azziz R, Barber TM, Hinney A, Obermayer-Pietsch B, Lukasova P, Bendlova B, Grigorescu F, Kowalska I, Goodarzi MO; GIANT Consortium, Strauss JF 3rd, McCarthy MI, Malecki MT. Impact of FTO genotypes on BMI and weight in polycystic ovary syndrome: a systematic review and meta-analysis. Diabetologia. 2012 Oct;55(10):2636-45. PubMed PMID: 22801903; PubMed Central PMCID: PMC3433670.

Xie GB, Xu P, Che YN, Xia YJ, Cao YX, Wang WJ, Qiao D, Wu XK, Yi L, Gao Q, Wang Y. Microsatellite polymorphism in the fibrillin 3 gene and susceptibility to PCOS: a case-control study and meta-analysis. Reprod Biomed Online. 2012 Oct 23. PubMed PMID: 23265956.

Zadeh-Vakili A, Ramezani Tehrani F, Daneshpour MS, Zarkesh M, Saadat N, Azizi F. Genetic polymorphism of vitamin D receptor gene affects the phenotype of PCOS. Gene. 2012 Dec 13. PubMed PMID: 23246977.

Zhang B, Zhao H, Li T, Gao X, Gao Q, Tang R, Zhang J, Chen ZJ. Association study of gene LPP in women with polycystic ovary syndrome. PLoS One. 2012;7(10):e46370. PubMed PMID: 23056290; PubMed Central PMCID: PMC3463595.

PCOS – Immunological Considerations

Moro F, Morciano A, Tropea A, Sagnella F, Palla C, Scarinci E, Cosentino N, Niccoli G, Liuzzo G, Crea F, Lanzone A, Apa R. CD4(+)CD28(null) T lymphocyte frequency, a new marker of cardiovascular risk: relationship with polycystic ovary syndrome phenotypes. Fertil Steril. 2012 Dec;98(6):1609-15. PubMed PMID: 22963806.

PCOS – After the Menopause

Markopoulos MC, Valsamakis G, Kouskouni E, Boutsiadis A, Papassotiriou I, Creatsas G, Mastorakos G. Study of carbohydrate metabolism indices and adipocytokine profile and their relationship with androgens in polycystic ovary syndrome after menopause. Eur J Endocrinol. 2012 Dec 10;168(1):83-90. PubMed PMID: 23076844.

PCOS – Metabolic Dysfunction/Cardiovascular Disease/Inflammation

Alanbay I, Ercan CM, Sakinci M, Coksuer H, Ozturk M, Tapan S. A macrophage activation marker chitotriosidase in women with PCOS: does low-grade chronic inflammation in PCOS relate to PCOS itself or obesity? Arch Gynecol Obstet. 2012 Oct;286(4):1065-71. PubMed PMID: 22718099.

Alanbay I, Mutlu Ercan C, Coksuer H, Sakinci M, Karasahin KE, Ozturk O, Yaman H. Neopterin: a promising marker for the inflammation in polycystic ovary syndrome. Gynecol Endocrinol. 2012 Nov;28(11):879-83. PubMed PMID: 22607465.

Atiomo W, Daykin CA. Metabolomic biomarkers in women with polycystic ovary syndrome: a pilot study. Mol Hum Reprod. 2012 Nov;18(11):546-53. PubMed PMID: 22809877.

Baba T, Endo T, Ikeda K, Shimizu A, Morishita M, Kuno Y, Honnma H, Kiya T, Ishioka S, Saito T. Weight reduction and pioglitazone ameliorate polycystic ovary syndrome after removal of a Sertoli-stromal cell tumor. Int J Womens Health. 2012;4:607-11. PubMed PMID: 23226075; PubMed Central PMCID: PMC3514067.

Barber TM, Franks S. Adipocyte biology in polycystic ovary syndrome. Mol Cell Endocrinol. 2012 Oct 17. PubMed PMID: 23084978.

Bird ST, Hartzema AG, Brophy JM, Etminan M, Delaney JA. Risk of venous thromboembolism in women with polycystic ovary syndrome: a population-based matched cohort analysis. CMAJ. 2012 Dec 3. PubMed PMID: 23209115.

Cakir E, Doğan M, Topaloglu O, Ozbek M, Cakal E, Vural MG, Yeter E, Delibasi T. Subclinical atherosclerosis and hyperandrogenemia are independent risk factors for increased epicardial fat thickness in patients with PCOS and idiopathic hirsutism. Atherosclerosis. 2013 Jan;226(1):291-5. PubMed PMID: 23206979.

Cakir E, Ozbek M, Sahin M, Cakal E, Gungunes A, Ginis Z, Demirci T, Delibasi T. Heart type fatty acid binding protein response and subsequent development of atherosclerosis in insulin resistant polycystic ovary syndrome patients. J Ovarian Res. 2012 Dec 18;5(1):45. PubMed PMID: 23249450.

Carlsen SM, Martinussen MP, Vanky E. Metformin's effect on first-year weight gain: a follow-up study. Pediatrics. 2012 Nov;130(5):e1222-6. PubMed PMID: 23071212.

Carmina E. PCOS: metabolic impact and long-term management. Minerva Ginecol. 2012 Dec;64(6):501-6. PubMed PMID: 23232534.

Celik C, Abali R, Guzel S, Bastu E, Kucukyalcin V, Yilmaz M. Elevated circulating levels of YKL-40 are a marker of abnormal glucose tolerance in women with polycystic ovary syndrome. Clin Endocrinol (Oxf). 2012 Dec;77(6):893-7. PubMed PMID: 22583189.

Celik O, Acbay O. Effects of metformin plus rosuvastatin on hyperandrogenism in polycystic ovary syndrome patients with hyperlipidemia and impaired glucose tolerance. J Endocrinol Invest. 2012 Nov;35(10):905-10. PubMed PMID: 22522778.

Chang CY, Chen MJ, Yang WS, Yeh CY, Ho HN, Chen SU, Yang YS. Hypoadiponectinemia: A useful marker of dyslipidemia in women with polycystic ovary syndrome. Taiwan J Obstet Gynecol. 2012 Dec;51(4):583-90. PubMed PMID: 23276562.

Choi YS, Yang HI, Cho S, Jung JA, Jeon YE, Kim HY, Seo SK, Lee BS. Serum asymmetric dimethylarginine, apelin, and tumor necrosis factor-α levels in non-obese women with polycystic ovary syndrome. Steroids. 2012 Nov;77(13):1352-8. PubMed PMID: 22944040.

Cicero AF, Tartagni E, Ertek S. Metformin and its clinical use: new insights for an old drug in clinical practice. Arch Med Sci. 2012 Nov 9;8(5):907-17 PubMed PMID: 23185203; PubMed Central PMCID: PMC3506244.

Deniz R, Gurates B, Aydin S, Celik H, Sahin I, Baykus Y, Catak Z, Aksoy A, Citil C, Gungor S. Nesfatin-1 and other hormone alterations in polycystic ovary syndrome. Endocrine. 2012 Dec;42(3):694-9. PubMed PMID: 22367584.

Diamanti-Kandarakis E, Dunaif A. Insulin resistance and the polycystic ovary syndrome revisited: an update on mechanisms and implications. Endocr Rev. 2012 Dec;33(6):981-1030. PubMed PMID: 23065822.

Escobar-Morreale HF. Iron metabolism and the polycystic ovary syndrome. Trends Endocrinol Metab. 2012 Oct;23(10):509-15. PubMed PMID: 22579050.

Esfahanian F, Zamani MM, Heshmat R, Moini Nia F. Effect of Metformin compared with hypocaloric diet on serum C-reactive protein level and insulin resistance in obese and overweight women with polycystic ovary syndrome. J Obstet Gynaecol Res. 2012 Dec 21. PubMed PMID: 23279603.

Fenkci SM, Fenkci V, Oztekin O, Rota S. Serum calcitonin gene-related peptide levels in women with polycystic ovary syndrome. Arch Gynecol Obstet. 2012 Dec 21. PubMed PMID: 23263174.

Galazis N, Afxeniou T, Xenophontos M, Diamanti-Kandarakis E, Atiomo W. Proteomic Biomarkers of Type 2 Diabetes Mellitus (T2DM) Risk in Women with Polycystic Ovary Syndrome (PCOS). Eur J Endocrinol. 2012 Oct 23. PubMed PMID: 23093701.

Gateva AT, Kamenov ZA. Markers of visceral obesity and cardiovascular risk in patients with polycystic ovarian syndrome. Eur J Obstet Gynecol Reprod Biol. 2012 Oct;164(2):161-6. PubMed PMID: 22727921.

Genazzani AD, Prati A, Santagni S, Ricchieri F, Chierchia E, Rattighieri E, Campedelli A, Simoncini T, Artini PG. Differential insulin response to myo-inositol administration in obese polycystic ovary syndrome patients. Gynecol Endocrinol. 2012 Dec;28(12):969-73. PubMed PMID: 22612517.

Glintborg D, Hermann AP, Rasmussen LM, Andersen M. Plasma osteoprotegerin is associated with testosterone levels but unaffected by pioglitazone treatment in patients with polycystic ovary syndrome. J Endocrinol Invest. 2012 Nov 26. PubMed PMID: 23211475.

Gonzalez F, Kirwan JP, Rote NS, Minium J. Glucose ingestion stimulates atherothrombotic inflammation in polycystic ovary syndrome. Am J Physiol Endocrinol Metab. 2012 Dec 18. PubMed PMID: 23249695.

González F, Sia CL, Shepard MK, Rote NS, Minium J. Hyperglycemia-induced oxidative stress is independent of excess abdominal adiposity in normal-weight women with polycystic ovary syndrome. Hum Reprod. 2012 Dec;27(12):3560-8. PubMed PMID: 22940766; PubMed Central PMCID: PMC3501242.

González F, Sia CL, Shepard MK, Rote NS, Minium J. Inflammation in response to glucose ingestion is independent of excess abdominal adiposity in normal-weight women with polycystic ovary syndrome. J Clin Endocrinol Metab. 2012 Nov;97(11):4071-9. PubMed PMID: 22904174; PubMed Central PMCID: PMC3485595.

González F, Sia CL, Stanczyk FZ, Blair HE, Krupa ME. Hyperandrogenism exerts an anti-inflammatory effect in obese women with polycystic ovary syndrome. Endocrine. 2012 Dec;42(3):726-35. PubMed PMID: 22752961; PubMed Central PMCID: PMC3488360.

Gulhan I, Bozkaya G, Oztekin D, Uyar I, Kebapcilar AG, Pamuk B. Serum Fetuin-A levels in women with polycystic ovary syndrome. Arch Gynecol Obstet. 2012 Dec;286(6):1473-6. PubMed PMID: 22865037.

Hilali N, Vural M, Camuzcuoglu H, Camuzcuoglu A, Aksoy N. Increased Prolidase Activity and Oxidative Stress in PCOS. Clin Endocrinol (Oxf). 2012 Nov 20. PubMed PMID: 23163753.

Huang G, Coviello A. Clinical update on screening, diagnosis and management of metabolic disorders and cardiovascular risk factors associated with polycystic ovary syndrome. Curr Opin Endocrinol Diabetes Obes. 2012 Dec;19(6):512-9. PubMed PMID: 23108199.

Huang ZH, Manickam B, Ryvkin V, Zhou XJ, Fantuzzi G, Mazzone T, Sam S. PCOS Is Associated with Increased CD11c Expression and Crown-Like Structures in Adipose Tissue and Increased Central Abdominal Fat Depots Independent of Obesity. J Clin Endocrinol Metab. 2013 Jan;98(1):E17-24. PubMed PMID: 23118428.

Hudecova M, Jan H, Christian B, Poromaa Inger S. Long-term reproductive and metabolic consequences of PCOS. Curr Diabetes Rev. 2012 Nov;8(6):444-51. PubMed PMID: 22934549.

Joham AE, Teede HJ, Hutchison SK, Stepto NK, Harrison CL, Strauss BJ, Paul E, Watt MJ. Pigment epithelium-derived factor, insulin sensitivity, and adiposity in polycystic ovary syndrome: impact of exercise training. Obesity (Silver Spring). 2012 Dec;20(12):2390-6. PubMed PMID: 22641183.

Jones H, Sprung VS, Pugh CJ, Daousi C, Irwin A, Aziz N, Adams VL, Thomas EL, Bell JD, Kemp GJ, Cuthbertson DJ. Polycystic ovary syndrome with hyperandrogenism is characterized by an increased risk of hepatic steatosis compared to nonhyperandrogenic PCOS phenotypes and healthy controls, independent of obesity and insulin resistance. J Clin Endocrinol Metab. 2012 Oct;97(10):3709-16. PubMed PMID: 22837189.

Kahal H, Aburima A, Ungvari T, Rigby A, Dawson A, Coady A, Vince R, Ajjan R, Kilpatrick E, Naseem K, Atkin S. Polycystic ovary syndrome has no independent effect on vascular, inflammatory or thrombotic markers when matched for obesity. Clin Endocrinol (Oxf). 2012 Dec 27. PubMed PMID: 23278130.

Karoli R, Fatima J, Siddiqi Z, Vatsal P, Sultania AR, Maini S. Study of early atherosclerotic markers in women with polycystic ovary syndrome. Indian J Endocrinol Metab. 2012 Nov;16(6):1004-8. PubMed PMID: 23226652; PubMed Central PMCID: PMC3510926.

Kaya MG, Calapkorur B, Karaca Z, Yildirim S, Celik A, Akpek M, Unluhizarci K, Kelestimur F. The effects of treatment with drospirenone/ethinyl oestradiol alone or in combination with metformin on elastic properties of aorta in women with polycystic ovary syndrome. Clin Endocrinol (Oxf). 2012 Dec;77(6):885-92. PubMed PMID: 22563947.

Koiou E, Tziomalos K, Katsikis I, Papadakis E, Kandaraki EA, Panidis D. Platelet-derived microparticles in overweight/obese women with the polycystic ovary syndrome. Gynecol Endocrinol. 2012 Dec 6. PubMed PMID: 23216335.

Kulshreshtha B, Gupta N, Ganie MA, Ammini AC. Effect of metformin and spironolactone therapy on OGTT in patients with polycystic ovarian syndrome - a retrospective analysis. Gynecol Endocrinol. 2012 Oct;28(10):823-6. PubMed PMID: 22475072.

Legro RS. Obesity and PCOS: implications for diagnosis and treatment. Semin Reprod Med. 2012 Dec;30(6):496-506. PubMed PMID: 23074008.

Lerchbaum E, Giuliani A, Gruber HJ, Pieber TR, Obermayer-Pietsch B. Adult-type hypolactasia and calcium intake in polycystic ovary syndrome. Clin Endocrinol (Oxf). 2012 Dec;77(6):834-43. PubMed PMID: 22233423.

Lerchbaum E, Schwetz V, Giuliani A, Obermayer-Pietsch B. Hypertriglyceridemic waist is associated with impaired glucose tolerance in polycystic ovary syndrome. Nutr Metab Cardiovasc Dis. 2012 Dec 3. PubMed PMID: 23218173.

Lerchbaum E, Schwetz V, Giuliani A, Pieber TR, Obermayer-Pietsch B. Opposing effects of dehydroepiandrosterone sulfate and free testosterone on metabolic phenotype in women with polycystic ovary syndrome. Fertil Steril. 2012 Nov;98(5):1318-25.e1. PubMed PMID: 22835450.

Li J, Wang F, Kong HJ, Liu WW, Sun YP. Differentiation of polycystic ovary syndrome-derived human embryonic stem cells into adipocytes and their glucose consumption. Gynecol Endocrinol. 2012 Nov;28(11):871-3. PubMed PMID: 22571227.

Liang SJ, Liou TH, Lin HW, Hsu CS, Tzeng CR, Hsu MI. Obesity is the predominant predictor of impaired glucose tolerance and metabolic disturbance in polycystic ovary syndrome. Acta Obstet Gynecol Scand. 2012 Oct;91(10):1167-72. PubMed PMID: 22497305.

Lim SS, Davies MJ, Norman RJ, Moran LJ. Overweight, obesity and central obesity in women with polycystic ovary syndrome: a systematic review and meta-analysis. Hum Reprod Update. 2012 Nov-Dec;18(6):618-37. PubMed PMID: 22767467.

Lim SS, Norman RJ, Davies MJ, Moran LJ. The effect of obesity on polycystic ovary syndrome: a systematic review and meta-analysis. Obes Rev. 2013 Feb;14(2):95-109. PubMed PMID: 23114091.

Mani H, Levy MJ, Davies MJ, Morris DH, Gray LJ, Bankart J, Blackledge H, Khunti K, Howlett TA. Diabetes and cardiovascular events in women with polycystic ovary syndrome; a 20 years retrospective cohort study. Clin Endocrinol (Oxf). 2012 Oct 9. PubMed PMID: 23046078.

Mario FM, do Amarante F, Toscani MK, Spritzer PM. Lean muscle mass in classic or ovulatory PCOS: association with central obesity and insulin resistance. Exp Clin Endocrinol Diabetes. 2012 Oct;120(9):511-6. PubMed PMID: 22576259.

Mayama R, Izawa T, Sakai K, Sucin N, Iwashita M. Improvement of insulin sensitivity promotes extravillous trophoblast cell migration stimulated by insulin-like growth factor-I. Endocr J. 2012 Nov 30. PubMed PMID: 23197113.

Mohsen IA, Elkattan E, Nabil H, Khattab S. Effect of metformin treatment on endometrial vascular indices in anovulatory obese/overweight women with polycystic ovarian syndrome using three-dimensional power doppler ultrasonography. J Clin Ultrasound. 2012 Nov 2. PubMed PMID: 23124626.

Moran LJ, Noakes M, Wittert GA, Clifton PM, Norman RJ. Weight loss and vascular inflammatory markers in overweight women with and without polycystic ovary syndrome. Reprod Biomed Online. 2012 Nov;25(5):500-3. PubMed PMID: 22995747.

Moreno JL, Willett KC, Desilets AR. Exenatide as a novel weight loss modality in patients without diabetes. Ann Pharmacother. 2012 Dec;46(12):1700-6. PubMed PMID: 23191935.

Okoroh EM, Hooper WC, Atrash HK, Yusuf HR, Boulet SL. Is polycystic ovary syndrome another risk factor for venous thromboembolism? United States, 2003-2008. Am J Obstet Gynecol. 2012 Nov;207(5):377.e1-8. PubMed PMID: 22959762.

Olszanecka-Glinianowicz M, Madej P, Nylec M, Owczarek A, Szanecki W, Skałba P, Chudek J. Circulating apelin level in relation to nutritional status in polycystic ovary syndrome and its association with metabolic and hormonal disturbances. Clin Endocrinol (Oxf). 2012 Dec 1. PubMed PMID: 23199261.

Ozerlat I. Reproductive endocrinology: Endothelial dysfunction in women with polycystic ovary syndrome--an inherent effect? Nat Rev Endocrinol. 2012 Oct;8(10):566. PubMed PMID: 22847243.

Pal L, Berry A, Coraluzzi L, Kustan E, Danton C, Shaw J, Taylor H. Therapeutic implications of vitamin D and calcium in overweight women with polycystic ovary syndrome. Gynecol Endocrinol. 2012 Dec;28(12):965-8. PubMed PMID: 22780885.

Patra SK, Nasrat H, Goswami B, Jain A. Vitamin D as a predictor of insulin resistance in Polycystic Ovarian Syndrome. Diabetes Metab Syndr. 2012 Jul-Sep;6(3):146-9. PubMed PMID: 23158978.

Pavone M, Salerno T, Cambiaso P, Verrillo E, Rossi FP, Cutrera R. Continuous positive pressure non-invasive ventilation for the management of obstructive sleep apnoea in a 15-year-old girl with polycystic ovary syndrome. J Paediatr Child Health. 2012 Oct;48(10):E194-5. PubMed PMID: 23094634.

Randeva HS, Tan BK, Weickert MO, Lois K, Nestler JE, Sattar N, Lehnert H. Cardiometabolic aspects of the polycystic ovary syndrome. Endocr Rev. 2012 Oct;33(5):812-41. PubMed PMID: 22829562; PubMed Central PMCID: PMC3461136.

Rashad NM, El-Shal AS, Abdelaziz AM. Association between inflammatory biomarker serum procalcitonin and obesity in women with polycystic ovary syndrome. J Reprod Immunol. 2012 Dec 3. PubMed PMID: 23218400.

Rey-Roldan E, Perez Lana MB, Galluzzo L, Blanco G, Onetto C, Straminsky V, Nolting MP. Is the polycystic ovary syndrome the causative of the increase in inflammatory markers and metabolic risk? Gynecol Endocrinol. 2013 Feb;29(2):141-4. PubMed PMID: 23116196.

Roessler KK, Birkebaek C, Ravn P, Andersen MS, Glintborg D. Effects of exercise and group counselling on body composition and VO(2max) in overweight women with polycystic ovary syndrome. Acta Obstet Gynecol Scand. 2012 Dec 12. PubMed PMID: 23237575.

Sathyapalan T, Shepherd J, Coady AM, Kilpatrick ES, Atkin SL. Atorvastatin reduces malondialdehyde concentrations in patients with polycystic ovary syndrome. J Clin Endocrinol Metab. 2012 Nov;97(11):3951-5. PubMed PMID: 22879630.

Saxena P, Prakash A, Nigam A, Mishra A. Polycystic ovary syndrome: Is obesity a sine qua non? A clinical, hormonal, and metabolic assessment in relation to body mass index. Indian J Endocrinol Metab. 2012 Nov;16(6):996-9. PubMed PMID: 23226650; PubMed Central PMCID: PMC3510975.

Seow KM, Lin YH, Wang PH, Hwang JL, Ho LT, Juan CC. Aquaglyceroporin-7 Overexpression in Women with the Polycystic Ovary Syndrome. Gynecol Obstet Invest. 2012 Dec 7. PubMed PMID: 23235401.

Singh IP, Mahajan S. Berberine and its derivatives: a patent review (2009 - 2012). Expert Opin Ther Pat. 2012 Dec 12. PubMed PMID: 23231038.

Singh S, Akhtar N, Ahmad J. Plasma adiponectin levels in women with polycystic ovary syndrome: Impact of Metformin treatment in a case-control study. Diabetes Metab Syndr. 2012 Oct;6(4):207-11. PubMed PMID: 23199540.

Sova H, Puistola U, Morin-Papunen L, Karihtala P. Metformin decreases serum 8-hydroxy-2'-deoxyguanosine levels in polycystic ovary syndrome. Fertil Steril. 2012 Oct 31. PubMed PMID: 23122829.

Tao T, Li S, Zhao A, Mao X, Liu W. Early impaired β-cell function in chinese women with polycystic ovary syndrome. Int J Clin Exp Pathol. 2012;5(8):777-86. PubMed PMID: 23071860; PubMed Central PMCID: PMC3466975.

Teng HW, Chien YW, Hsu MI, Chen CI. The relationship between carotid intima-media thickness and endogenous androgens in young women with polycystic ovary syndrome in Taiwan. Gynecol Endocrinol. 2012 Nov 23. PubMed PMID: 23174031.

Trakakis E, Basios G, Peppa M, Simeonidis G, Labos G, Creatsa M, Misailidou M, Boutati E, Vaggopoulos V, Panagopoulos P, Dimitriades G, Kassanos D. The prevalence of glucose metabolism abnormalities in Greek women with polycystic ovary syndrome. Gynecol Endocrinol. 2012 Nov;28(11):867-70. PubMed PMID: 22571176.

Tsai YH, Wang TW, Wei HJ, Hsu CY, Ho HJ, Chen WH, Young R, Liaw CM, Chao JC. Dietary intake, glucose metabolism and sex hormones in women with polycystic ovary syndrome (PCOS) compared with women with non-PCOS-related infertility. Br J Nutr. 2012 Oct 10:1-9. PubMed PMID: 23046530.

Vigerust NF, Bohov P, Bjørndal B, Seifert R, Nygård O, Svardal A, Glintborg D, Berge RK, Gaster M. Free carnitine and acylcarnitines in obese patients with polycystic ovary syndrome and effects of pioglitazone treatment. Fertil Steril. 2012 Dec;98(6):1620-1626.e1. PubMed PMID: 22999793.

Wang ET, Ku IA, Shah SJ, Daviglus ML, Schreiner PJ, Konety SH, Williams OD, Siscovick D, Bibbins-Domingo K. Polycystic Ovary Syndrome Is Associated with Higher Left Ventricular Mass Index: The CARDIA Women's Study. J Clin Endocrinol Metab. 2012 Dec;97(12):4656-62. PubMed PMID: 23012389.

Whiting L, Danaher RN, Ruggiero K, Lee CC, Chaussade C, Mulvey T, Phillips A, Loomes KM. d-chiro-Inositol Attenuates Epinephrine-stimulated Hepatic Glucose Output in the Isolated Perfused Liver Independently of Insulin. Horm Metab Res. 2012 Dec 7. PubMed PMID: 23225249.

Yang M, Liu R, Li S, Luo Y, Zhang Y, Zhang L, Liu D, Wang Y, Xiong Z, Boden G, Chen S, Li L, Yang G. Zinc-α2-Glycoprotein Is Associated With Insulin Resistance in Humans and Is Regulated by Hyperglycemia, Hyperinsulinemia, or Liraglutide Administration: Cross-sectional and interventional studies in normal subjects, insulin-resistant subjects, and subjects with newly diagnosed diabetes. Diabetes Care. 2012 Dec 28. PubMed PMID: 23275352.

Yasmin E, Balen AH, Barth JH. The association of body mass index and biochemical hyperandrogenaemia in women with and without polycystic ovary syndrome. Eur J Obstet Gynecol Reprod Biol. 2012 Oct 23. PubMed PMID: 23102586.

Zhao Y, Fu L, Li R, Wang LN, Yang Y, Liu NN, Zhang CM, Wang Y, Liu P, Tu BB, Zhang X, Qiao J. Metabolic profiles characterizing different phenotypes of polycystic ovary syndrome: plasma metabolomics analysis. BMC Med. 2012 Nov 30;10(1):153. PubMed PMID: 23198915.

Zhu JP, Teng YC, Zhou J, Lu W, Tao MF, Jia WP. Increased mean glucose levels in patients with polycystic ovary syndrome and hyperandrogenemia as determined by continuous glucose monitoring. Acta Obstet Gynecol Scand. 2012 Oct 17. PubMed PMID: 23072215.

Ziaee A, Oveisi S, Ghorbani A, Hashemipour S, Mirenayat M. Association between Metabolic Syndrome and Premicroalbuminuria among Iranian women with Polycystic Ovary Syndrome: a Case Control Study. Glob J Health Sci. 2012 Nov 30;5(1):187-92. PubMed PMID: 23283052.

PCOS – Neuroendocrine Dysfunction

Lansdown A, Rees DA. The sympathetic nervous system in polycystic ovary syndrome: a novel therapeutic target? Clin Endocrinol (Oxf). 2012 Dec;77(6):791-801PubMed PMID: 22882204.

Sandoval-Guzmán T, Göngrich C, Moliner A, Guo T, Wu H, Broberger C, Ibáñez CF. Neuroendocrine control of female reproductive function by the activin receptor ALK7. FASEB J. 2012 Dec;26(12):4966-76. PubMed PMID: 22954591.

PCOS – Ovary

Abuzeid MI, Mitwally M, Abuzeid YM, Bokhari HA, Ashraf M, Diamond MP. Early initiation of gonadotropin-releasing hormone antagonist in polycystic ovarian syndrome patients undergoing assisted reproduction: randomized controlled trial ISRCTN69937179. J Assist Reprod Genet. 2012 Nov;29(11):1193-202. PubMed PMID: 22960769; PubMed Central PMCID: PMC3510369.

Al Kindi MK, Al Essry FS, Al Essry FS, Mula-Abed WA. Validity of serum testosterone, free androgen index, and calculated free testosterone in women with suspected hyperandrogenism. Oman Med J. 2012 Nov;27(6):471-4. PubMed PMID: 23226817; PubMed Central PMCID: PMC3515039.

Alcázar JL, Kudla MJ. Ovarian stromal vessels assessed by spatiotemporal image correlation-high definition flow in women with polycystic ovary syndrome: a case-control study. Ultrasound Obstet Gynecol. 2012 Oct;40(4):470-5. PubMed PMID: 22605534.

Balen AH. Ovulation induction in the management of anovulatory polycystic ovary syndrome. Mol Cell Endocrinol. 2012 Oct 17. PubMed PMID: 23084977.

Bhattacharya SM, Jha A. Comparative study of the therapeutic effects of oral contraceptive pills containing desogestrel, cyproterone acetate, and drospirenone in patients with polycystic ovary syndrome. Fertil Steril. 2012 Oct;98(4):1053-9. PubMed PMID: 22795636.

Carmina E, Campagna AM, Mansuet P, Vitale G, Kort D, Lobo R. Does the level of serum antimüllerian hormone predict ovulatory function in women with polycystic ovary syndrome with aging? Fertil Steril. 2012 Oct;98(4):1043-6. PubMed PMID: 22771030.

Casadei L, Puca F, Emidi E, Manicuti C, Madrigale A, Piccione E. Sequential low-dose step-up and step-down protocols with recombinant follicle-stimulating hormone in polycystic ovary syndrome: prospective comparison with step-down protocol. Arch Gynecol Obstet. 2012 Nov;286(5):1291-7. PubMed PMID: 22729136.

Casano S, Guidetti D, Patriarca A, Pittatore G, Gennarelli G, Revelli A. MILD ovarian stimulation with GnRH-antagonist vs. long protocol with low dose FSH for non-PCO high responders undergoing IVF: a prospective, randomized study including thawing cycles. J Assist Reprod Genet. 2012 Dec;29(12):1343-51. PubMed PMID: 23086704; PubMed Central PMCID: PMC3528871.

de Resende LO, Vireque AA, Santana LF, Moreno DA, de Sá Rosa e Silva AC, Ferriani RA, Scrideli CA, Reis RM. Single-cell expression analysis of BMP15 and GDF9 in mature oocytes and BMPR2 in cumulus cells of women with polycystic ovary syndrome undergoing controlled ovarian hyperstimulation. J Assist Reprod Genet. 2012 Oct;29(10):1057-65. PubMed PMID: 22825968; PubMed Central PMCID: PMC3492567.

Dokras A. In search of the best combined oral contraceptive for treatment of polycystic ovary syndrome. Fertil Steril. 2012 Oct;98(4):825-6. PubMed PMID: 22883569.

Dunne C, Havelock JC. Malignant ovarian Sertoli-Leydig cell tumor localized with selective ovarian vein sampling. J Minim Invasive Gynecol. 2012 Nov-Dec;19(6):789-93. PubMed PMID: 23084689.

Fleming R, Kelsey TW, Anderson RA, Wallace WH, Nelson SM. Interpreting human follicular recruitment and antimüllerian hormone concentrations throughout life. Fertil Steril. 2012 Nov;98(5):1097-102. PubMed PMID: 22921077.

Fulghesu AM, Romualdi D, Di Florio C, Sanna S, Tagliaferri V, Gambineri A, Tomassoni F, Minerba L, Pasquali R, Lanzone A. Is there a dose-response relationship of metformin treatment in patients with polycystic ovary syndrome? Results from a multicentric study. Hum Reprod. 2012 Oct;27(10):3057-66. PubMed PMID: 22786777.

Galazis N, Olaleye O, Haoula Z, Layfield R, Atiomo W. Proteomic biomarkers for ovarian cancer risk in women with polycystic ovary syndrome: a systematic review and biomarker database integration. Fertil Steril. 2012 Dec;98(6):1590-1601.e1. PubMed PMID: 22959458.

Grynnerup AG, Lindhard A, Sørensen S. The role of anti-Müllerian hormone in female fertility and infertility - an overview. Acta Obstet Gynecol Scand. 2012 Nov;91(11):1252-60. PubMed PMID: 22646322.

Haouzi D, Assou S, Monzo C, Vincens C, Dechaud H, Hamamah S. Altered gene expression profile in cumulus cells of mature MII oocytes from patients with polycystic ovary syndrome. Hum Reprod. 2012 Dec;27(12):3523-30 PubMed PMID: 22951915.

Homburg R, Singh A, Bhide P, Shah A, Gudi A. The re-growth of growth hormone in fertility treatment: a critical review. Hum Fertil (Camb). 2012 Dec;15(4):190-3. PubMed PMID: 23190271.

Ikeda K, Baba T, Noguchi H, Nagasawa K, Endo T, Kiya T, Saito T. Excessive androgen exposure in female-to-male transsexual persons of reproductive age induces hyperplasia of the ovarian cortex and stroma but not polycystic ovary morphology. Hum Reprod. 2012 Nov 27. PubMed PMID: 23188113.

Imbar T, Klipper E, Greenfield C, Hurwitz A, Haimov-Kochman R, Meidan R. Altered endothelin expression in granulosa-lutein cells of women with polycystic ovary syndrome. Life Sci. 2012 Oct 15;91(13-14):703-9. PubMed PMID: 22727793.

Junk SM, Yeap D. Improved implantation and ongoing pregnancy rates after single-embryo transfer with an optimized protocol for in vitro oocyte maturation in women with polycystic ovaries and polycystic ovary syndrome. Fertil Steril. 2012 Oct;98(4):888-92. PubMed PMID: 22835445.

Kaur S, Archer KJ, Devi MG, Kriplani A, Strauss JF 3rd, Singh R. Differential gene expression in granulosa cells from polycystic ovary syndrome patients with and without insulin resistance: identification of susceptibility gene sets through network analysis. J Clin Endocrinol Metab. 2012 Oct;97(10):E2016-21. PubMed PMID: 22904171.

Khalaf M, Morera J, Bourret A, Reznik Y, Denoual C, Herlicoviez M, Mittre H, Benhaim A. BMP system expression in granulosa cells.from polycystic ovary syndrome women and the in vitro effects of BMP 4, BMP 6, BMP 7 on granulosa cells steroidogenesis. Eur J Endocrinol. 2012 Dec 14. PubMed PMID: 23243014.

Kumbak B, Oral E, Bukulmez O. Female obesity and assisted reproductive technologies. Semin Reprod Med. 2012 Dec;30(6):507-16. PubMed PMID: 23074009.

Lee MS, Kim SH, Kim DS, Min KS, Yoon JT. Metformin enhances the action of insulin on porcine granulosa-lutein cells in vitro. Anim Reprod Sci. 2012 Dec;136(1-2):100-7. PubMed PMID: 23141431.

Li RH, Ng EH. Management of anovulatory infertility. Best Pract Res Clin Obstet Gynaecol. 2012 Dec;26(6):757-68. PubMed PMID: 22703626.

Misso ML, Teede HJ, Hart R, Wong J, Rombauts L, Melder AM, Norman RJ, Costello MF. Status of clomiphene citrate and metformin for infertility in PCOS. Trends Endocrinol Metab. 2012 Oct;23(10):533-43. PubMed PMID: 22939889.

Moll E, van Wely M, Lambalk CB, Bossuyt PM, van der Veen F. Health-related quality of life in women with newly diagnosed polycystic ovary syndrome randomized between clomifene citrate plus metformin or clomifene citrate plus placebo. Hum Reprod. 2012 Nov;27(11):3273-8. PubMed PMID: 22926838.

Nahuis MJ, Oude Lohuis E, Kose N, Bayram N, Hompes P, Oosterhuis GJ, Kaaijk EM, Cohlen BJ, Bossuyt PP, van der Veen F, Mol BW, van Wely M. Long-term follow-up of laparoscopic electrocautery of the ovaries versus ovulation induction with recombinant FSH in clomiphene citrate-resistant women with polycystic ovary syndrome: an economic evaluation. Hum Reprod. 2012 Dec;27(12):3577-82. PubMed PMID: 23001778.

Nascimento AD, Lara LA, Rosa-E-Silva AC, Ferriani RA, Reis RM. Effects of metformin on serum insulin and anti-mullerian hormone levels and on hyperandrogenism in patients with polycystic ovary syndrome. Gynecol Endocrinol. 2012 Nov 30. PubMed PMID: 23194004.

Palomba S, Falbo A, La Sala G. Effects of metformin in women with polycystic ovary syndrome treated with gonadotrophins for in vitro fertilisation and intracytoplasmic sperm injection cycles: a systematic review and meta-analysis of randomised controlled trials. BJOG. 2012 Nov 30. PubMed PMID: 23194199.

Panidis D, Tziomalos K, Chatzis P, Papadakis E, Delkos D, Tsourdi EA, Kandaraki EA, Katsikis I. Association between menstrual cycle irregularities and endocrine and metabolic characteristics of the polycystic ovary syndrome. Eur J Endocrinol. 2012 Oct 29. PubMed PMID: 23109645.

Polzikov M, Yakovenko S, Voznesenskaya J, Troshina M, Zatsepina O. Overexpression of ribosomal RNA in cumulus cells of patients with polycystic ovary syndrome. J Assist Reprod Genet. 2012 Oct;29(10):1141-5. PubMed PMID: 22772454; PubMed Central PMCID: PMC3492582.

Sahin N, Toylu A, Gülekli B, Doğan E, Kovali M, Atabey N. The levels of hepatocyte growth factor in serum and follicular fluid and the expression of c-Met in granulosa cells in patients with polycystic ovary syndrome. Fertil Steril. 2013 Jan;99(1):264-269.e3. PubMed PMID: 23036804.

Sarkar C, Maitra A. Elucidation of regulatory mechanisms revealed by human promoter sequence analysis of genes co-expressed in forskolin-treated theca cells in PCOS. Arch Gynecol Obstet. 2012 Oct 17. PubMed PMID: 23073722.

Sinawat S, Buppasiri P, Lumbiganon P, Pattanittum P. Long versus short course treatment with metformin and clomiphene citrate for ovulation induction in women with PCOS. Cochrane Database Syst Rev. 2012 Oct 17;10:CD006226. PubMed PMID: 23076922.

Tang T, Balen AH. Use of metformin for women with polycystic ovary syndrome. Hum Reprod Update. 2013 Jan-Feb;19(1):1. PubMed PMID: 23114640.

Tannus S, Weissman A, Boaz M, Horowitz E, Ravhon A, Golan A, Levran D. The effect of delayed initiation of gonadotropin-releasing hormone antagonist in a flexible protocol on in vitro fertilization outcome. Fertil Steril. 2012 Dec 6. PubMed PMID: 23219008.

Upadhyay RD, Balasinor NH, Kumar AV, Sachdeva G, Parte P, Dumasia K. Proteomics in reproductive biology: Beacon for unraveling the molecular complexities. Biochim Biophys Acta. 2013 Jan;1834(1):8-15. PubMed PMID: 23072795.

Usadi RS, Legro RS. Reproductive impact of polycystic ovary syndrome. Curr Opin Endocrinol Diabetes Obes. 2012 Dec;19(6):505-11. PubMed PMID: 23108198.

Vosnakis C, Georgopoulos NA, Rousso D, Mavromatidis G, Katsikis I, Roupas ND, Mamali I, Panidis D. Diet, physical exercise and Orlistat administration increase serum Anti-Müllerian Hormone (AMH) levels in women with polycystic ovary syndrome (PCOS). Gynecol Endocrinol. 2012 Nov 30. PubMed PMID: 23194076.

Wickenheisser JK, Biegler JM, Nelson-Degrave VL, Legro RS, Strauss JF 3rd, McAllister JM. Cholesterol side-chain cleavage gene expression in theca cells: augmented transcriptional regulation and mRNA stability in

polycystic ovary syndrome. PLoS One. 2012;7(11):e48963. PubMed PMID: 23155436; PubMed Central PMCID: PMC3498373.

Xiao J, Chen S, Zhang C, Chang S. Effectiveness of GnRH antagonist in the treatment of patients with polycystic ovary syndrome undergoing IVF: a systematic review and meta analysis. Gynecol Endocrinol. 2012 Nov 30. PubMed PMID: 23194095.

Xiao J, Chen S, Zhang C, Chang S. The effectiveness of metformin ovulation induction treatment in patients with PCOS: a systematic review and meta-analysis. Gynecol Endocrinol. 2012 Dec;28(12):956-60. PubMed PMID: 22808990.

PCOS – Phenotypic Variation

Boyle J, Teede HJ. Polycystic ovary syndrome - An update. Aust Fam Physician. 2012 Oct;41(10):752-6. PubMed PMID: 23210095.

Cinar N, Harmanci A, Aksoy DY, Aydin K, Yildiz BO. Adrenocortical steroid response to ACTH in different phenotypes of non-obese polycystic ovary syndrome. J Ovarian Res. 2012 Dec 7;5(1):42. PubMed PMID: 23216997; PubMed Central PMCID: PMC3523978.

Gabrielli L, Aquino EM. Polycystic ovary syndrome in Salvador, Brazil: a prevalence study in primary healthcare. Reprod Biol Endocrinol. 2012 Nov 22;10(1):96. PubMed PMID: 23173761.

Okoroh EM, Hooper WC, Atrash HK, Yusuf HR, Boulet SL. Prevalence of polycystic ovary syndrome among the privately insured, United States, 2003-2008. Am J Obstet Gynecol. 2012 Oct;207(4):299.e1-7. PubMed PMID: 22921097.

Vaggopoulos V, Trakakis E, Chrelias C, Panagopoulos P, Basios G, Makridima S, Sioulas VD, Simeonides G, Labos G, Boutati E, Kassanos D. Comparing classic and newer phenotypes in Greek PCOS women: the prevalence of Metabolic Syndrome and their association with Insulin Resistance. J Endocrinol Invest. 2012 Nov 27. PubMed PMID: 23211631.

Yildiz BO, Bozdag G, Yapici Z, Esinler I, Yarali H. Prevalence, phenotype and cardiometabolic risk of polycystic ovary syndrome under different diagnostic criteria. Hum Reprod. 2012 Oct;27(10):3067-73.. PubMed PMID: 22777527.

Zhang HY, Guo CX, Zhu FF, Qu PP, Lin WJ, Xiong J. Clinical characteristics, metabolic features, and phenotype of Chinese women with polycystic ovary syndrome: a large-scale case-control study. Arch Gynecol Obstet. 2012 Oct 30. PubMed PMID: 23108387.

PCOS – Pregnancy Complications

Boutzios G, Livadas S, Piperi C, Vitoratos N, Adamopoulos C, Hassiakos D, Iavazzo C, Diamanti-Kandarakis E. Polycystic ovary syndrome offspring display increased oxidative stress markers comparable to gestational diabetes offspring. Fertil Steril. 2012 Nov 29. PubMed PMID: 23200689.

Capalbo A, Bono S, Spizzichino L, Biricik A, Baldi M, Colamaria S, Ubaldi FM, Rienzi L, Fiorentino F. Sequential comprehensive chromosome analysis on polar bodies, blastomeres and trophoblast: insights into

female meiotic errors and chromosomal segregation in the preimplantation window of embryo development. Hum Reprod. 2012 Nov 11. PubMed PMID: 23148203.

de Oliveira Baraldi C, Moisés EC, de Jesus Ponte Carvalho TM, de Jesus Antunes N, Lanchote VL, Duarte G, Cavalli RC. Effect of type 2 diabetes mellitus on the pharmacokinetics of metformin in obese pregnant women. Clin Pharmacokinet. 2012 Nov;51(11):743-9. PubMed PMID: 23018469.

Glueck CJ, Goldenberg N, Pranikoff J, Khan Z, Padda J, Wang P. Effects of metformin-diet intervention before and throughout pregnancy on obstetric and neonatal outcomes in patients with polycystic ovary syndrome. Curr Med Res Opin. 2013 Jan;29(1):55-62. PubMed PMID: 23205605.

Maliqueo M, Lara HE, Sánchez F, Echiburú B, Crisosto N, Sir-Petermann T. Placental steroidogenesis in pregnant women with polycystic ovary syndrome. Eur J Obstet Gynecol Reprod Biol. 2012 Nov 1. PubMed PMID: 23122578.

Mumm H, Kamper-Jørgensen M, Nybo Andersen AM, Glintborg D, Andersen M. Birth weight and polycystic ovary syndrome in adult life: a register-based study on 523,757 Danish women born 1973-1991. Fertil Steril. 2012 Nov 29. PubMed PMID: 23200688.

Rø TB, Ludvigsen HV, Carlsen SM, Vanky E. Growth, body composition and metabolic profile of 8-year-old children exposed to metformin in utero. Scand J Clin Lab Invest. 2012 Nov;72(7):570-5. PubMed PMID: 22935043.

Sella T, Shalev V, Elchalal U, Chovel-Sella A, Chodick G. Screening for gestational diabetes in the 21st century: a population-based cohort study in Israel. J Matern Fetal Neonatal Med. 2012 Oct 30. PubMed PMID: 23035769.

Vanky E, DE Zegher F, Díaz M, Ibáñez L, Carlsen SM. On the potential of metformin to prevent preterm delivery in women with polycystic ovary syndrome - an epi-analysis. Acta Obstet Gynecol Scand. 2012 Dec;91(12):1460-1464. PubMed PMID: 23006146.

Vanky E, Nordskar JJ, Leithe H, Hjorth-Hansen AK, Martinussen M, Carlsen SM. Breast size increment during pregnancy and breastfeeding in mothers with polycystic ovary syndrome: a follow-up study of a randomised controlled trial on metformin versus placebo. BJOG. 2012 Oct;119(11):1403-9. PubMed PMID: 22827167.

Yamamoto M, Feigenbaum SL, Crites Y, Escobar GJ, Yang J, Ferrara A, Lo JC. Risk of preterm delivery in non-diabetic women with polycystic ovarian syndrome. J Perinatol. 2012 Oct;32(10):770-6. PubMed PMID: 22261835.

PCOS – Protocol Reviews

None.

PCOS – Psychology

Ferraresi SR, Lara LA, Reis RM, Silva AC. Changes in Sexual Function among Women with Polycystic Ovary Syndrome: A Pilot Study. J Sex Med. 2012 Dec 4. PubMed PMID: 23210985.

Gugatschka M, Lichtenwagner S, Schwetz V, Lerchbaum E, Graupp M, Gerstenberger C, Kiesler K, Obermayer-Pietsch B, Friedrich G. Subjective and objective vocal parameters in women with polycystic ovary syndrome. J Voice. 2013 Jan;27(1):98-100. PubMed PMID: 23159022.

Hoirisch-Clapauch S, Nardi AE. Psychiatric remission with warfarin: Should psychosis be addressed as plasminogen activator imbalance? Med Hypotheses. 2012 Dec 1. PubMed PMID: 23211375.

Palomba S, Marotta R, Cello AD, Russo T, Falbo A, Orio F, Tolino A, Zullo F, Esposito R, Sala GB. Pervasive developmental disorders in children of hyperandrogenic women with polycystic ovary syndrome: a longitudinal case-control study. Clin Endocrinol (Oxf). 2012 Dec;77(6):898-904. PubMed PMID: 22612600.

Rellini AH, Stratton N, Tonani S, Santamaria V, Brambilla E, Nappi RE. Differences in sexual desire between women with clinical versus biochemical signs of hyperandrogenism in polycystic ovarian syndrome. Horm Behav. 2013 Jan;63(1):65-71PubMed PMID: 23127604.

Rodrigues CE, Ferreira Lde L, Jansen K, Lopez MR, Drews Júnior CR, Souza LD. Evaluation of common mental disorders in women with polycystic ovary syndrome and its relationship with body mass index. Rev Bras Ginecol Obstet. 2012 Oct;34(10):442-6. PubMed PMID: 23288220.

Veltman-Verhulst SM, Boivin J, Eijkemans MJ, Fauser BJ. Emotional distress is a common risk in women with polycystic ovary syndrome: a systematic review and meta-analysis of 28 studies. Hum Reprod Update. 2012 Nov-Dec;18(6):638-51. PubMed PMID: 22824735.

Zhou JQ, Zhou LM, Chen LJ, Han JD, Wang Q, Fang ZY, Chen ZY, Ling S. Polycystic ovary syndrome in patients with epilepsy: a study in 102 Chinese women. Seizure. 2012 Nov;21(9):729-33. PubMed PMID: 22944116.

PCOS – Thyroid Complications

Benetti-Pinto CL, Berini Piccolo VR, Garmes HM, Teatin Juliato CR. Subclinical hypothyroidism in young women with polycystic ovary syndrome: an analysis of clinical, hormonal, and metabolic parameters. Fertil Steril. 2012 Oct 25. PubMed PMID: 23103018.

Nisar S, Shah PA, Kuchay MS, Bhat MA, Rashid A, Ahmed S, Ganie MA. Association of polycystic ovary syndrome and Graves' disease: Is autoimmunity the link between the two diseases. Indian J Endocrinol Metab. 2012 Nov;16(6):982-6. PubMed PMID: 23226647; PubMed Central PMCID: PMC3510972.

PCOS – Uterus

Eryilmaz OG, Sarikaya E, Gulerman C, Akar S, Cicek N. Endometrial thickness measurement throughout a menstrual cycle in non-obese infertile patients with polycystic ovary syndrome. Arch Gynecol Obstet. 2012 Dec;286(6):1597-600. PubMed PMID: 22865034.

Holm NS, Glintborg D, Andersen MS, Schledermann D, Ravn P. The prevalence of endometrial hyperplasia and endometrial cancer in women with polycystic ovary syndrome or hyperandrogenism. Acta Obstet Gynecol Scand. 2012 Oct;91(10):1173-6. PubMed PMID: 22583042.

Leonhardt H, Gull B, Kishimoto K, Kataoka M, Nilsson L, Janson PO, Stener-Victorin E, Hellström M. Uterine morphology and peristalsis in women with polycystic ovary syndrome. Acta Radiol. 2012 Dec 1;53(10):1195-201. PubMed PMID: 23081959.

Ormazabal P, Romero C, Gabler F, Quest AF, Vega M. Decreased Phosphorylation of Y14Caveolin-1 in Endometrial Tissue of Polycystic Ovary Syndrome Patients may be Related with an Insulin Resistant State in this Tissue. Horm Metab Res. 2012 Dec 7. PubMed PMID: 23225242.

Shamim N, Usala SJ, Biggs WC, McKenna GB. The elasticity of cervical-vaginal secretions is abnormal in polycystic ovary syndrome: Case report of five PCOS women. Indian J Endocrinol Metab. 2012 Nov;16(6):1019-21. PubMed PMID: 23226656; PubMed Central PMCID: PMC3510930.

Woodard TL, Awonuga AO, Puscheck E. Malignant transformation of endometrioma in a woman with a history of ovulation induction and in vitro fertilization. Case Report Med. 2012;2012:497362. PubMed PMID: 23304157.

Premature Adrenarche

Kılıç A, Durmuş MS, Ünüvar E, Yıldız I, Aydın BK, Uçar A, Bundak R, Baş F, Darendeliler F, Oğuz F, Sıdal M, Yekeler E. Clinical and laboratory characteristics of children referred for early puberty: preponderance in 7-8 years of age. J Clin Res Pediatr Endocrinol. 2012 Dec;4(4):208-12

Lazar L, Phillip M. Pubertal disorders and bone maturation. Endocrinol Metab Clin North Am. 2012 Dec;41(4):805-2

von Oettingen J, Sola Pou J, Levitsky LL, Misra M. Clinical presentation of children with premature adrenarche. Clin Pediatr (Phila). 2012 Dec;51(12):1140-9.

Brief summaries of selected publications

Congenital Adrenal Hyperplasia and Disorders of Steroidogenesis

Chen W, Xu Z, Nishitani M, Van Ryzin C, McDonnell NB, Merke DP. Complement component 4 copy number variation and CYP21A2 genotype associations in patients with congenital adrenal hyperplasia due to 21-hydroxylase deficiency. Hum Genet. 2012 Dec;131(12):1889-94

The gene encoding 21-hydroxylase (CYP21A2) is located in a complex genetic locus on chromosome 6 at the central region of the human major histocompatibility complex. There is a highly homologous pseudogene in close physical proximity and genes that encode complement 4 (C4A and C4B). Two other genes, RP1 and TNXB, are in tandem with CYP21 and C4 gene from the telomeric to centromeric ends constituting a genetic module termed RCCX (R P-C 4-C YP21-TN X). The RCCX modules are characterized by modular duplication or deletion events in which each duplicated or deleted module usually covers a CYP21A1P-TNXA-RP2-C4 unit. The most common haplotype is a bimodular RCCX format. The RCCX modules can be considered as copy number variants. These investigators found that the most common CYP21A2 mutation associated with the nonclassic form of CAH, V281L, was associated with high C4 copy number. A large CYP21A2 deletion leads to a complete loss of function mutation and the classic salt-losing form of CAH. The large deletion was associated with low C4 copy number. Monomodular RCCX with a short C4 gene is a risk factor for autoimmune disease and was found to be less frequent in patients with CAH compared to population estimates. The investigators concluded that CAH patients have increased C4 CNV, with mutation-specific associations that may be protective for autoimmune disease. Thus, CNV involving C4 may influence propensity to develop autoimmune disorders.

Insulin resistance

Han MS, Jung DY, Morel C, Lakhani SA, Kim JK, Flavell RA, Davis RJ. JNK expression by macrophages promotes obesity-induced insulin resistance and inflammation. Science. 2013 Jan 11;339(6116):218-22. doi: 10.1126/science.1227568. Epub 2012 Dec 6.

The cJun NH(2)-terminal kinase (JNK) signaling pathway contributes to inflammation and plays a key role in the metabolic response to obesity, including insulin resistance. This pathway participates in a cell signaling cascade that senses metabolic stress leading to activation of obesity-induced inflammatory responses. Hirosumi and colleagues (Nature 2002;420:333) generated JNK1 and JNK2 knock-out mice and reported that JNK2 knockout mice were protected from weight gain, whereas no metabolic effect was noted for the JNK1 knockout mice. In this report, Han and colleagues generated mice with selective JNK1 and JNK2 deficiencies in macrophages. They found that feeding a high-fat diet to control and JNK-deficient mice caused similar obesity. Only mice with JNK-deficient macrophages, however, remained insulin-sensitive. Despite the improved insulin sensitivity, other aspects of metabolic dysfunction such as circulating fatty acid concentrations were unaffected. The protection of mice with macrophage-specific JNK deficiency against insulin resistance was associated with reduced tissue infiltration by macrophages. It remains to be determined if myeloid JNK signaling contributes to insulin resistance and inflammatory responses to a similar extent in other obese animals, e.g. humans.