

Polycystic Ovarian Syndrome Conference

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Recent advancements in polycystic ovarian syndrome diagnosis and therapy

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Despite high prevalence, the etiology of PCOS is not clearly understood. In childhood premature adrenarche, SGA, weight gain can be a forerunner of the future abnormalities of insulin resistance and PCOS. Weight gain complicated with insulin resistance potentiates ovarian and adrenal hyperandrogenism by enhancing LH secretion, potentiating 17-hydroxylase and 17, 20-lyase activity and suppressing SHBG. Insulin resistance can lead to relative Hexose-6 -phosphate dehydrogenase (H6PGH) deficiency and lower cortisol availability and feedback leading to increase in androstenedione, DHEA and DHEAS. Increased DHEA can decrease nuclear glucocorticoid receptor levels in the hippocampus, decrease 11 β -hydroxysteroid dehydrogenase (11 β -HSD) type-1 activities and inhibit the expression of H6PDH. Decreased activity of 11 β -HSD type-1 is responsible for interconverting active cortisol and inactive cortisone and thus responsible for tissue-specific glucocorticoid bioavailability and secondary hyperandrogenism. Metformin improves ovulation, reduce androgen levels, increase SHBG and helps in reduction of body weight, reduces the risk of miscarriage and the risk of gestational diabetes. Rosiglitazone increases insulin sensitivity in obese and in lean patients with PCOS. Rosiglitazone is as well effective in decreasing the androgen levels. D-chiro-inositol (DCI) treatment improves insulin resistance and serum AMH levels. Combination of Inositol and metformin decrease the oxidative damage, insulin resistance and androgens. Combined oral contraceptives (OCs) are superior to metformin in reducing androgens but inferior to metformin in reducing insulin resistance. Treatment in each case must be individual, depending on age, weight, insulin resistance, level of androgens and hirsutism.

Biography

Svetlana Ten has received her Medical degree from Minsk Medical University in Belarus. She has completed fellowships in Pediatric Endocrinology at Cornell University in 2002; studied Endocrinology in Akita, Japan in 1992-1993 and at Moscow State University in 1989. She has worked as a Program Director of Pediatric Endocrinology Divisions and Fellowship Programs of Maimonides Hospital and SUNY Downstate Hospital from 2004-2014. Currently, she is working as a private Pediatric Endocrinologist. Her areas of expertise are problems with short stature, irregular periods, thyroid, adrenal disorders, PCOS and diabetes. She has more than 60 publications in these areas.

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