Letters to the Editor

Polycystic ovarian disease: Still an enigma!

Sir,

We read with great interest the review article on polycystic ovarian syndrome (PCOS) in the May-June 2013 issue of the journal by Madnani *et al.*[1] Though PCOS is a fairly common condition, till date there are unresolved controversies regarding the role of specific clinical, laboratory, and radiological features for accurate diagnosis of this condition. We appreciate the authors' attempt to succinctly summarize a relatively complicated topic, both in terms of the relationship of disease with acne, diagnosis and treatment of the condition and outcome of acne after PCOS has been "successfully" treated. However, there are a few pertinent features that seem to be have been missed out in this discussion:

1. Difficulty of diagnosis in adolescent population: PCOS has reasonably well-defined clinical, biochemical, and radiological features in adult women, but in the adolescent population, some of these features may overlap with normal puberty leading to difficulties in making a diagnosis. Irregular menstruation, anovulatory cycles, polycystic ovarian morphology, and acne are not uncommon in adolescents, and PCOS may mimic physiological anovulation in adolescents. Further, the rising prevalence of obesity in the younger population resulting in insulin resistance predisposes these girls to ovarian hyperandrogenism leading to younger age of presentation and more severe phenotype. The difficulties of distinguishing between normal puberty and true ovarian hyperandrogenism and excluding other causes of androgen excess such as adrenal tumors or non-classical congenital adrenal hyperplasia are compounded in adolescents due to relative paucity of data. It has been recommended that for diagnosing PCOS in an adoloscent, menstrual irregularity lasting for over 2 years and accurate assessment of hyperandrogenic and metabolic features should be given preference as diagnostic features over the ultrasound-detected polycystic ovarian morphology.[2] Moreover, for ultrasound screening in adolescents, the transabdominal approach should be used, instead of transvaginal, which is ideal for adults.
2. PCOS, pregnancy, and lactation: The impact of PCOS during pregnancy and lactation, change of medications during these phases and difficulties in diagnosis of PCOS during pregnancy and lactation could have been mentioned. Women with PCOS appear to have a reduced breastfeeding rate in the early postpartum period, possibly due to gestational dehydroepiandrosterone sulfate.[3] Though the authors mention advantages of metformin during pregnancy, its safety during pregnancy has not been commented on. Indeed it is considered to be safe with no evidence of congenital abnormality detected till date due to this drug.[4] How does one diagnose a lady with sudden eruption of acne, and hirsutism during the postpartum phase with lactational amenorrhea? Does one need to wait for any investigations till the patient's cycles resume or are there other methods for diagnosis?
3. Role of sex hormone binding globulin (SHBG) and biochemical evaluation for PCOS: Though the authors have mentioned the role of SHBG in disease pathogenesis, the measurement of its levels or the term "free androgen index (FAI)" have not been mentioned in the list of investigations to be done in a suspected case. Indeed, there is a consensus that accurate measurement of free testosterone (T) levels are most important to detect hyperandrogenemia and since direct assays for free T are not very accurate, determination of FAI should be a part of PCOS biochemical workup.[5] [FAI = (total T (nmol/L)/SHBG (nmol/L)) × 100].
4. Normoandrogenemic PCOS, idiopathic hirsutism, and role of androgen receptor (AR) gene polymorphism: The Rotterdam PCOS consensus workshop group's revised 2003 consensus on diagnostic criteria clearly states that a proportion of PCOS patients may not demonstrate an overt abnormality in circulating androgens.[5] Even in our experience, only 60-70% patients with clinical features of PCOS

have one or more elevated androgens (most commonly free T), the remaining have normal levels and we suggest the term "normoandrogenemic PCOS" for them. The role of AR activity mediated by the CAG repeat polymorphism in the pathogenesis of PCOS is an active area of research and the authors could have mentioned this evolving concept. In a study conducted in 250 south Indian women with PCOS and 299 controls, AR microsatellite variation seemed to account for hyperandrogenicity in obese PCOS patients to a large extent.[6] Whether this is similar to AR hypersensitivity observed in patients with idiopathic hirsutism needs further research.

5. Though the authors mention the risk of metabolic syndrome in PCOS patients, we suggest that the addition of a simple non-invasive radiological investigation like carotid intima media thickness (CIMT) in the list of work-up of patients with PCOS would encourage early cardiovascular screening and interventions to control modifiable cardiovascular risk factors.[7]

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REFERENCES

1. Madnani N, Khan K, Chauhan P, Parmar G. Polycystic ovarian syndrome. Indian J Dermatol Venereol Leprol 2013;79:310-21.
2. Ságodi L, Barkai L. Diagnostic difficulties of polycystic ovarian syndrome in adolescent girls. Orv Hetil 2013;154:136-42.
3. Vanky E, Isaksen H, Moen MH, Carlsen SM. Breastfeeding in polycystic ovary syndrome. Acta Obstet Gynecol Scand 2008;87:531-5.
4. Thatcher SS, Jackson EM. Pregnancy outcome in infertile patients with polycystic ovary syndrome who were treated with metformin. Fertil Steril 2006;85:1002-9.
5. Rotterdam ESHRE/ASRM-Sponsored PCOS consensus workshop group. Revised 2003 consensus on diagnostic criteria and long-term health risks related to polycystic ovary syndrome (PCOS). Hum Reprod 2004;19:41-7.
6. Dasgupta S, Sirisha PV, Neelaveni K, Anuradha K, Reddy AG, Thangaraj K, *et al*. Androgen receptor CAG repeat polymorphism and epigenetic influence among the south Indian women with polycystic ovary syndrome. PLoS One 2010;5:e12401.
7. Meyer ML, Malek AM, Wild RA, Korytkowski MT, Talbott EO. Carotid artery intima-media thickness in polycystic ovary syndrome: A systematic review and meta-analysis. Hum Reprod Update 2012;18:112-26.