## ADOLESCENT MEDICINE

# ADOLESCENT POLYCYSTIC OVARY SYNDROME

### \*Sheila Balakrishnan \*\* Nair MKC

Abstract: Polycystic ovary syndrome is the most frequent endocrinopathy in women and adolescents. Insulin resistance and compensatory hyperinsulinaemia are seen in most cases of polycystic ovary syndrome. This article focuses on the clinical features, differential diagnosis, the current recommendations for diagnosis, management strategies, the importance of screening for PCOS in adolescence to prevent future problems and long-term sequelae, especially, the metabolic syndrome.

**Keywords**: *Polycystic ovary syndrome, Adolescence, Insulin resistance, Metabolic syndrome* 

- \* Dept of Reproductive Medicine and Surgery, Government Medical College, Trivandrum.
- \*\* Vice Chancellor, Kerala University of Health Sciences, and Emeritus Professor, Adolescent Pediatrics, CDC, Kerala.

email : cdcmkc@gmail.com

### **Points to Remember**

- Adolescent PCOS is diagnosed 2 years after menarche, if both irregular periods and hyperandrogenism (clinical and/or biochemical) are present.
- Polycystic ovaries on ultrasound is not necessary for the diagnosis of adolescent PCOS.
- Screening is recommended in adolescence to prevent long-term sequelae.
- Management should include measures to prevent the metabolic syndrome.

#### References

- 1. Azziz R, Woods KS, Reyna R, Key TJ, Knochenhauer ES, Yildiz BO. The prevalence and features of the polycystic ovary syndrome in an unselected population. J Clin Endocrinol Metab 2004; 89:2745-2749.
- Stein I, Leventhal M. Amenorrhoea associated with bilateral polycysticovaries. Am J Obstet Gynecol 1935; 29:181-185.
- 3. Avvad CK, Holeuwerger R, Silva VC, Bordallo MA, Breitenbach MM. Menstrual irregularity in the first postmenarchal years: an early clinical sign of polycystic ovary syndrome in adolescence Gynecol Endocrinol 2001;15:170-177.
- The Rotterdam ESHRE/ASRM-Sponsored PCOS consensus workshop group. Revised 2003 consensus on diagnostic criteria and long-term health risksrelated to polycystic ovary syndrome (PCOS). Hum Reprod 2004; 19:41-47.
- Recommendations from the international evidence based guidelines for the diagnosis and management of polycystic ovary syndrome Fertility and Sterility Vol. 110, No. 3, August 2018 0015-0282. Accessed on 21<sup>nd</sup> Feb 2019.
- 6. Dunaif A. Insulin resistance and the polycystic ovary syndrome: mechanisms and implications for pathogenesis. Endocr Rev 1997; 18:774-800.
- Cook S. The metabolic syndrome: Antecedent of adult cardiovascular disease in pediatrics. J Pediatr 2004; 145:427-430.
- Ferriman D, Gallwey JD. Clinical assessment of body hair growth in women. J Clin Endocrinol Metab 1961; 21:1440-1447.

Indian Journal of Practical Pediatrics

- 9. Balen AH, Laven JS, Tan SL, Dewailly D. Ultrasound assessment of the polycystic ovary: international consensus definition. Hum Reprod Update 2003; 9(6):505-514.
- Nair MKC, Pappachan P, Balakrishnan S, Leena ML, George B, Russell PS. Menstrual irregularity and poly cystic ovarian syndrome among adolescent girls-a 2 year follow-up study. Indian J Pediatr 2012; 79 Suppl1: S69-73.
- Chang JR, Coffler MS. Polycystic ovary syndrome: early detection in theadolescent. Clin Obstet Gynecol 2007; 50:178-187.
- 12. Weiss R, Dziura J, Burgert TS, Tamborlane WV, Taksali SE, Yeckel CW, et al. Obesity and the metabolic syndrome in children and adolescents. N Engl J Med 2004; 350: 2362-2374.
- Coviello AD, Legro RS, Dunaif A. Adolescent girls with PCOS have an increased risk of the metabolic syndrome associated with increasing androgen levels independent of obesity and insulin resistance JCEM 2006; 91(2):492-497.
- Consensus on women's health aspects of polycystic ovary syndrome (PCOS): the Amsterdam ESHRE/ASRM-Sponsored 3rd PCOS Consensus Workshop Group. Fertil Steril 2012; 97(1):28-38.
- 15. Sreekumari R, Nair MKC, Nirmala C. Association of overweight and insulin resistance with polycystic ovary syndrome (PCOS). Health Science 2016; 1(2):17-22.
- Lord JM, Flight IH, Norman RJ. Metformin in polycystic ovary syndrome: systematic review and meta analysis. BMJ 2003; 327:951-953.
- Hoeger K, Davidson K, Kochman L, Cherry T, Kopin L, Guzick DS. The impact of metformin, oral contraceptives and lifestyle modification on polycystic ovary syndrome in obese adolescent women in two randomized, placebocontrolled clinical trials. J Clin Endocrinol Metab 2008; 93(11):4299-306.
- Legro RS, Arslanian SA, Ehrmann DA, Hoeger KM, Hassan Murad M, Pasquali R, et al. Diagnosis and treatment of polycystic ovary syndrome: An Endocrine Society clinical practice guideline. J Clin Endocrinol Metab 2013; 98(12):4565-4592.