

Assessment of the Prevalence of Polycystic Ovary Syndrome among the College Students: A Case–Control Study from Kolkata

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Abstract

Background: Polycystic ovary syndrome (PCOS) is one of the most common endocrine disorders in women of reproductive age. Of late, the disease is on its rise due to environmental changes as well as lifestyle disorders, affecting 4%–26% of adolescent and young women all over the globe. Initially, this condition is asymptomatic in young girls, progressing toward menstrual irregularities, obesity, hyperandrogenism in late puberty and eventually developing insulin resistance, hypertension, type 2 diabetes, cardiovascular diseases, and infertility around middle age. **Aims:** Early diagnosis is necessary for early intervention, including lifestyle modifications to prevent the immediate and chronic consequences of PCOS. **Materials and Methods:** Our study design was of a cross-sectional questionnaire-based survey, conducted from September 2017 to March 2018 to investigate the prevalence of PCOS and its association with body composition variables. The study population comprised randomly chosen students (age group 18–20 years) of all discipline. The data were collected from the students using structured questionnaire with Rotterdam's criteria, and anthropometric measurements were taken using standard techniques. **Results:** Approximately 28% of the college students were found to be at high risk of developing PCOS. More than 85% of the PCOS cases had oligomenorrhea, 19% were hirsute, 41% had acne, 63% had emotional disturbance, and 22% with a positive family history. Furthermore, the body mass index of the PCOS students demonstrated a trend of Grade 1 obesity than the normal females of the same age group. **Conclusion:** The present study is an attempt to create increased awareness among the students for early and accurate diagnosis, which is the primary step in managing PCOS.

Keywords: Body mass index, hirsutism, obesity, oligomenorrhea, polycystic ovary syndrome, Rotterdam's criteria

INTRODUCTION

Polycystic ovary syndrome (PCOS) is a heterogeneous, multifactorial, complex disorder with a broad spectrum of clinical manifestations such as hyperandrogenism, polycystic ovaries, and ovulatory dysfunction. Reports suggest that women with PCOS are more likely to develop metabolic syndrome with obesity, dyslipidemia, and insulin resistance culminating in serious long-term consequences such as type 2 diabetes mellitus, cardiovascular disease, and infertility.^[1,2] PCOS accounts for significant health-care costs and distress and has a major impact on the quality of life and fertility.^[3] Approximately 4%–10% of the world population experiences PCOS although the incidence rate is higher for India, rounding off to 20%–26%.^[4] Although it has an alarming incidence globally, the syndrome is enigmatic with unclear etiology^[5]

and its diagnosis is difficult as it manifests as a spectrum of symptoms than a specific one. The symptoms of PCOS appear insidiously and are coincident with changes that accompany normal pubertal development, so it is difficult to identify the disorder in young girls.^[6] Thus, PCOS often goes unnoticed and undiagnosed during the adolescent period, except its manifestation as irregular cycles around menarche. The diverse manifestations of PCOS start at an early age with

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ON THE VARIATION OF PRIMATE HAIR: APPROACH TO EVOLUTIONARY BIOLOGY

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Abstract: Evolutionary trends in the light of variation are the mechanism of all (or almost all) evolutionary change in morphology. Biologists have recognized that the variation is the key to understanding morphological evolution. Studies integrating evolutionary and developmental analyses of morphological variation are of growing interest to biologists as this promise to shed fresh light on the mechanisms of morphological diversification. The magnitude and rate of morphological evolution in hominids suggests that many independent and incremental developmental changes have occurred are expected to be polygenic and regulatory in nature. Comparative studies on histomorphological and quantitative variables have begun to make complementary inroads into the complex genetic architecture of human evolution. Like other organs and parts of animal body, hair has also a range of diversity and the microscopic details to offer certain definite and variable features as well. In view of this the objectives of the present study is to understand the variation and evolutionary trend of histomorphological and quantitative variables of primate hair. Materials for the present study consist of Scalp hairs from 50 individuals from adult Bengalee population and hair strands from 3 adult non human primate species (50 hair strands from each) were taken for the present study. Results of the present study demonstrated imperative variation in medullation and evolutionary trend towards increased discontinuous and absent medullation and decreased continuous medullation. The cuticular scale revealed precise variation and evolutionary trend of flattened type among non human primates in contrast to crenate type in human. Examination on quantitative traits like shaft and medulla diameter revealed evolutionary trend as inverse relationship such as higher shaft diameter and lower medulla diameter in course of human evolution.

Keywords: Primates, Hair, Medulla, Cuticular scale