



All is Vain Without God - Psalm 127:1

DEPARTMENT OF BIOTECHNOLOGY & BIOINFORMATICS

BISHOP HEBER COLLEGE (Autonomous)

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INTERNATIONAL VIRTUAL CONFERENCE ON

BIOLOGICAL INNOVATIONS & COMPUTATIONAL EXPLORATION FOR PANDEMIC CHALLENGES (BICPAC'22)

24th & 25th February, 2022

Sponsored by

Department of Biotechnology

&

Council of Scientific and Industrial Research

Ministry of Science & Technology Government of India



सत्यमेव जयते



BEST POSTER AWARD

This is to certify that

Ms. Shraddha S

UGC-Junior Research Fellow

DOS in Food Science and Nutrition

University of Mysore

Mysuru, Karnataka

DBT

DBT/CTEP/01/20211051992

CSIR

Ref No. SYM/10715/21-HRD

has been awarded the **Best Poster Award** for his/her paper entitled

**COMPARISON OF BODY COMPOSITION CHARACTERISTICS AND FAT
DISTRIBUTION IN WOMEN WITH AND WITHOUT POLYCYSTIC OVARY SYNDROME**

Co-author: *Dr. Asna Urooj, Professor*

Presented in **BICPAC" 22**

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P56 COMPARISON OF BODY COMPOSITION CHARACTERISTICS AND FAT DISTRIBUTION IN WOMEN WITH AND WITHOUT POLYCYSTIC OVARY SYNDROME

Shraddha Shivakumar and Asna Urooj Department of Studies in Food Science and Nutrition, University of Mysore, Mysuru, Karnataka

Polycystic Ovary Syndrome (PCOS) is one of the common endocrine disorders leading to female infertility globally. Thus far, the causes and pathophysiology are not well-explored. Studies report that obesity, besides manifesting as a symptom of PCOS, also contribute to the etiopathogenesis of PCOS by disrupting the hormonal balance and metabolism. Undesirable weight gain and central fat distribution are related to an ovulation and infertility. In addition to that, it also increases the risk of developing insulin resistance, type-2 diabetes mellitus, cardiovascular disease and metabolic syndrome, irrespective of androgen levels. Hence, evaluating body composition parameters and fat distribution might serve as an early indicator of the risk of developing long-term complications of PCOS and its management and facilitate timely nutrition and medical intervention accordingly. To compare the body composition characteristics and fat distribution between PCOS affected women and women without PCOS. This case-control study design comprised 31 women diagnosed with PCOS as per Rotterdam criteria (2003) and 22 non-PCOS women in the age group of 20-40 years, recruited. The body composition of the subjects was examined using bioelectrical impedance technique (In Body 770, Korea) and the results were analysed using suitable statistical analysis of SPSS software (ver.16.0). Women with PCOS showed a highly significant difference concerning body fat mass, fat mass-trunk, right and left leg, visceral fat area, waist to hip ratio, body mass index, arm and arm muscle circumference than women without PCOS ($p < 0.01$). Also, women with PCOS had significantly higher total body water, intra- and extra-cellular water, skeletal muscle mass, soft lean mass, protein and minerals in the body than their parallel group ($p < 0.05$). However, no statistical difference existed between the bands for height, weight, fat-free mass, bone mineral content and basal metabolic rate ($p > 0.05$). The results of the study highlights abnormal fat distribution among PCOS-cohort with higher levels of body fat mass, visceral fat area, waist hip circumference and waist to hip ratio. Furthermore, unlike control subjects, a satisfactory level of skeletal muscle mass was reported.



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PROCEEDINGS
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