



## Metabolic Syndrome And Its Characteristic Among Reproductive Aged Women With Polycystic Ovary Syndrome

**Dr. Sushila Kharkwal**

MD, Professor Dept. of Obstetrics and gynaecology, MLB Medical College, Jhansi (UP)

**Dr Sanjaya Sharma**

MD, Professor and Head, Dept. of Obstetrics and gynaecology, MLB Medical College, Jhansi (UP)

**Dr Vidya chaudhary**

MS, Asso. Professor, Dept. of Obstetrics and gynaecology, MLB Medical College, Jhansi (UP)

**Dr Rajni Gautam**

MS, Asso Professor, Dept. of Obstetrics and gynaecology, MLB Medical College, Jhansi (UP)

**Dr Pratima Devi**

Junior resident, Dept. of Obstetrics and gynaecology, MLB Medical College, Jhansi (UP)

### ABSTRACT

*Objective-our purpose was to determine metabolic syndrome and its characteristic in reproductive age group in Polycystic ovary syndrome (PCOS) cases material and method-total 120 cases was taken 60 cases of PCOD and control group it has been concluded that 41.6% have metabolic syndrome among PCOD cases. 75% have waist hip ratio*

*>88cm. 60% cases have fasting blood sugar more than 100mg/dl. 15% cases have blood pressure > 130/85mmhg. HDL<50mg/dl in 70%. LDL>150mg/dl*

**KEYWORDS : Metabolic syndrome polycystic ovary syndrome.**

### Introduction

PCOS is the most common endocrinopathy affecting 6% of women with in reproductive age group. The overall prevalence of PCOS among women of reproductive age in united states was 4% , while in spain the frequency was 6.5% It is characterized by a combination of hyperandrogenism (either clinical or biochemical) chronic anovulation & polycystic ovaries, frequently associated with insulin resistance & obesity. The association of amenorrhea with bilateral polycystic ovaries & obesity was first, described in 1935 by stein & leventhal syndrome. In an international conference on PCOS organized by national institutes of health [NIH] in 1990 , diagnostic criteria for PCOS were based on consensus rather than clinical trials evidence . The 2003 Rotterdam consensus workshop concluded that PCOS is a syndrome of ovarian dysfunction, along with feature of hyperandrogenism & PCO morphology Diagnostic criteria for PCOS- NIH- Both of the following criteria required- Hyperandrogenic features (biochemically and/or clinically), Chronic anovulation (manifesting as menstrual disturbance). Rotterdam - Two or more of the following criteria. 1. Polycystic ovarian morphology on ultrasound scan 2. Hyperandrogenic features 3. Oligo-amenorrhoea (inter-menstrual interval greater than 42 days) The prevalence of PCOS greatly depends on which criteria are used for definition Metabolic syndrome is a cluster of metabolic symptoms including abdominal obesity, glucose intolerance hypertension, and dyslipidemia. NCEP ATP III CRITERIA- tree or more of the following five risk factors fasting blood sugar. 100mg/dl, BP. 130/85mmhg, LDL. 150 mg/dl, hdl, 50mg/dl waist hip ratio >88cm. The consequences of the metabolic syndrome extend beyond the reproductive axis women with this disorder are at substantial risk for the development of metabolic syndrome and cardiovascular abnormalities .this finding is not surprising , since both the polycystic ovary syndrome and the metabolic syndrome share insulin resistance as central pathogenesis.

### Material and Methods

This was a observation study conducted from march 2014 to October 2015 in M.L.B. Medical College, Jhansi, cases was selected from the women attending the OPD, department of Obs. & Gynae. Total 120 cases was taken, out of 120, 60 cases for control group. Before selecting the cases detailed history, General examination, systemic exami-

nation and relevant investigation were done. Inclusion criteria – cases of reproductive age group having menstrual disturbances.

### Observation & Results

Total 120 cases was studied 60 cases of PCOD & 60 cases of control group. Among cases 45 cases have waist hip ration >88cm, while in control group only 6 patients have >88cm. (P value – 0.008). 36 cases have fasting blood sugar >100mg/dl while in control group only 8 have FBS >100mg/dl (P-0.001), BP>130/85mmg in 9 cases,, HDL <50mg/dl in 42 cases, LOL >150 mg/dl in 25 cases. By NCEPATP III criteria 25 cases have metabolic syndrome.

### Discussion

In our study 41.6^ cases have metabolic syndrome while in In our study, the prevalence of the metabolic syndrome by using NCEP-ATP III definition 41.6% while in control group it is 10% . comparing with other studies done previously our result was significant. It is in very close agreement with 46% & 53% prevalence of metabolic syndrome in USA women with confirmed PCOS reported by Glueck et al (2003) and Apridonidze et al (2005). However it differ slightly from studies performed also in the united state by Dokras et al (2005) and Ehrmann et al (2006) which was 34.9% and 33.4% respectively.

### Conclusion

Cases with PCOD have higher chances of developing metabolic syndrome features.

### Abbreviations

PCOD, PCOS,

**TABLE I : PREVALENCE OF INDIVIDUAL COMPONENT OF METABOLIC SYNDROME AMONG PCOS WOMEN COMPARED WITH CONTROLS.**

	Cases [60]		Control [60]	
	No	%	No	%
Waisthip ration > 88cm	45	75%	10	16.6%

**TABLE II: FASTING BLOOD SUGAR**

	Cases [60]		Control [60]	
	No	%	No	%
Fasting blood sugar > 100mg/dl	36	60%	8	10%

TABLE III: BLOOD PRESSURE

	Cases [60]		Control [60]	
	No	%	No	%
Blood pressure >130/85 mmHg	9	15%	6	10%

TABLE IV: LIPID PROFILE

	Cases [60]		Control [60]	
	No	%	No	%
HDL <50 mg/dl	42	70%	7	10.6%
LDL >150 mg/dl	25	38.3%	4	6.0%

TABLE V: PREVALENCE OF METABOLIC SYNDROME IN WOMEN WITH PCOS COMPARED WITH CONTROL ACCORDING TO THE NCEP ATP III. DEFINITION.

	% OF METABOLIC SYNDROME IN PCOS [60]		% OF METABOLIC SYNDROME IN CONTROL [60]	
	No	%	No	%
NCEPATP III	25	41.6%	6	10%

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