Original Research Paper

Community Medicine

A COMPARATIVE STUDY TO FIND OUT THE ASSOCIATION OF MENSTRUAL IRREGULARITY IN INDIVIDUALS WITH HIRSUTISM AND NON-HIRSUTISM.

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ABSTRACT   **Back ground:** Commonly menstrual irregularity is identified as irregular cycles, most commonly present in hormonal disorder. There are various factors associated with menstrual irregularity, one such factor is polycystic ovarian syndrome. Various research studies shows, Individuals with hirsutism are commonly associated to have polycystic ovarian syndrome and menstrual irregularities. Hence the objective of this study to find out the association of menstrual irregularity in individuals with hirsutism .

Methods: Cross sectional study designs were done among 143 individuals, the study subjects were selected randomly from outpatient and inpatient department of Reproductive Medicine, Obstetrics and gynaecology and Endocrinology of Sri Ramachandra University. The tools of measurement were taken with a validated questionnaire of back ground characteristics and questions pertaining to hirsuitism and menstrual irregularities.

Results: Among 143 individuals the overall prevalence of Hirsutism was 21.7%. The prevalence of menstrual irregularities was 49.6% among individuals with hirsutism and non-hirsutism .when compared these individuals it was found statistically significant which signifies that patients suffering with hirsutism are more prone for menstrual irregularities which is 3.5 times risk of developing menstrual irregularities with hirsutism were p is less than 0.0008.

Conclusion: hence this study concludes there is a strong association of increased risk of developing menstrual irregularities in patients suffering with hirsutism when compared to non-hirsutism individuals.

KEYWORDS : .

Introduction:

Menstrual irregularity is seen in various conditions like fibroid uterus, polycystic ovarian syndrome (PCOS), hypothyroidism, obesity, type 2 diabetes. Menstrual irregularity commonly seen in hirsutism is amenorrhea (absence of menstruation for more than 6 months or 182 days) or oligomenorrrhea (absence of menstruation for 35 to 182 days). It is also a clinical feature of polycystic ovarian syndrome and hypothyroidism which is due to hyperandrogenism hence individuals with hirsutism also have associated clinical features like acanthosis nigrans and acne.

Methods

The study was under taken after obtaining ethical clearance from institutional ethics committee of Sri Ramachandra University under the head of founder chancellor summer research programme. Cross sectional study designs was done among 143 individuals, study subjects were selected randomly from outpatient and inpatient department of Reproductive Medicine, Obstetrics and gynecology, and Endocrinology of Sri Ramachandra University. The tools of measurement were taken with a validated questionnaire of back ground characteristics and questions pertaining to hirsuitism among individuals with menstrual irregularity and other individuals. Finally ferriman-gallwey score was performed to know the grade of hirsutism.

Results: Among 143 individuals the overall prevalence of Hirsutism was 21.7%. The prevalence of menstrual irregularities was 49.6% among individuals with hirsutism and non-hirsutism.

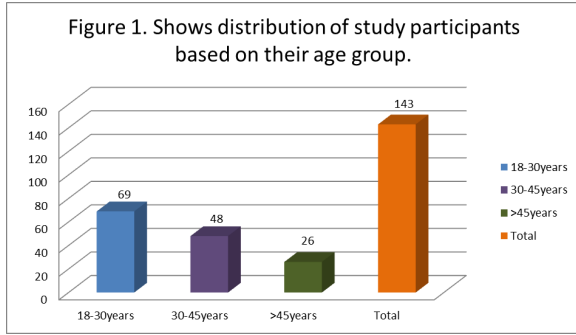**Table: 1** Background information of due study participants

Parameters	Frequency	Percentage
Marital status		
Single	14	9.8
Married	120	83.9
Widowed	9	6.3
Total	143	100
Number of children		
One child	23	16.1
Two children	43	30.1
No children	56	39.2
More than two children	21	14.7
Total	143	100
Education		
Illiterate	17	11.9
Primary	16	11.2
Secondary	41	28.7
Higher secondary	42	29.4
Degree	27	18.9
Total	143	100
Occupation		
Professional	7	4.9
Skilled	17	11.9
Semi skilled	103	72
Unskilled	6	4.2
Unemployed	10	7
Total	143	100
Type of family		
Nuclear	92	64.3
Joint	40	28
Extended	10	7
Others	1	0.7
Total	143	100
Place of living		
Panchayat	56	39.2
Township	31	21.7
Municipality	15	10.5
Metropolitan	41	28.7
Total	143	100

From the above table 1 shows that majority of the participants are married compared to unmarried and divorced individuals. In this study majority were not having any children . Majority are in the education level of higher secondary and secondary level compared to other education group. In this study majority were skilled worker compared to unskilled and semiskilled workers.

Many of the participants were living as a nuclear type of family when

compared with other types. The majority is from Panchayat. In this study more number of the study participants are in the age group of 18-30 years is shown in the figure 1.

Figure 1. Shows distribution of study participants based on their age group.

Ferriman galleway score is given below.,a sum of score more than 8 is taken in to account as hirsutism . The description of the score is given below.
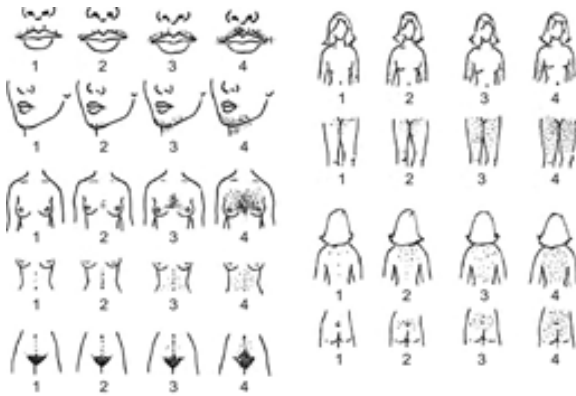

Table: 2 Shows comparison of due study participants who is suffering from menstrual irregularity when compared with hirsutism

Menstrual irregularity	Hirsutism present	Hirsutism absent	Chi-square test	Odds ratio	p value	Significance
Present	23	48	9.657	3.5	<0.008 Significant	
Absent	9	63				
Total	32	111				

Table2 shows that there is a strong association of menstrual irregularity with hirsutism. when compared these individuals it was found statistically significant which signifies that patients suffering with hirsutism are more prone for menstrual irregularities which is 3.5 times risk of developing menstrual irregularities with hirsutism were p is less than 0.0008.

Discussion: The prevalence of hirsutism was 21.7 % in the study population. This study was taken more than 18 years of age group. There are many studies done by various research scholar who have done the association between the menstrual cycle irregularities and metabolic charectestics among patients with poly cystic ovarian syndrome.

A study done by Dimitrios panidis et al (1) showed the significance association of menstrual irregularities with menstrual cycle abnorm alities represented as a useful tool for identifying a more adverse metabolic profile among patients suffering with polycystic ovarian syndrome and hirsutism. Similarly the current study showed the significant association of menstrual irregularities among patients suffering with hirsutism. However the later studies did not differentiate between patients with oligomenorrhea and amenorrhoea with hirsutism.

Conclusion. This study concludes there is a strong association of increased risk of developing menstrual irregularities in patients suffering with hirsutism when compared to non-hirsutism individuals

References:
1. Dimitrios panidis et al Association between menstrual cycle irregularities and endocrine and metabolic charecterstics of polycystic ovary syndrome ECur J. Endocrinology Feb 1.2013 168 145-152.
2. Robinson S,Kiddy.d,Gelding The relationship of insulin insensitivity to menstrual pattern in women with hyperandrogenism and polycystic ovaries.Clinical endocrinology 1993 39 351-355.
3. Welt CK,Gudmundsson JA,Arason g,Adams J, Characterizing discrete subset of polycystic ovary syndrome as defined by the Rotterdam criteria The impact of weight on phenotype and metabolic features.Journal of Clinical Endocrinology and Metabolism 2006 91 4842-4848.