

## Relation of Low Nutritional Status in Adolescent Girls with PCOS: Survey Study

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### ABSTRACT

**BACKGROUND:** Women as beautiful as nature, is the most delicate, complicate and supreme creation of god to mankind. The transition of a girl to a women and a women to a mother adds a sense of fullness to her life. Women unlike men is subjected to various diseases in relation to her reproductive system. One such disease is POLYCYSTIC OVARIAN SYNDROME. PCOS is one of the most common female endocrine disorders which are emerging as the major cause of problem among adolescent girls. Reproductive axis is closely linked to nutritional status especially undernutrition in females.

**MATERIAL AND METHODS:** During a camp study in ARYA MAHILLA COLLEGE survey was done on 100 pateints of adolescent age group. So, I thought of producing this report and publishing it. This study will help us to understnd relation of low haemoglobin and low nutritional status in girls suffering from PCOS. All the females , observed in camp in some or other way were suffering from nutritional deficiency( alapa ahara) irregular lifestyles, ( vihara) irregular menstruation (aniyamit aartava) and low haemoglobin percentage.

**RESULTS :** Among those 100 patients, 75 patients were observed to have low nutritional status and low haemoglobin percentage. During proper investigation Among those 80 patients had low Hb % , 75 patients were suffering from menstrual irregularities , 65 of them have postive scan report of PCOS.

**CONCLUSION :** PCOS is becoming a commom issue among adolescent girls. This could be a good question in future , as these females are going to be a reproductive female of future after 10 years or 5 years scan of time. So, does the government need to put an attention towards their vaginal and uterine health along with the mid-day meal as these are the programmes presently runned by government in schools.

**KEYWORDS:** PCOS, Haemoglobin, Vihara, Alpa Ahara

### I. INTRODUCTION

Polycystic ovarian syndrome (PCOS) is the most common endocrine system disorder in women of reproductive age, and it appears as a set of symptoms and disorders with mild to severe protests in the functioning of reproductive, hormonal and metabolic systems. PCOS is a major health concern because pateints with PCOS are at increased risk of infertility, pregnancy loss, obesity, cardiovascular disorders, diabetes mellitus, depression etc. The exact cause of PCOS is not known. Young women with PCOS are most often concerned with fertility. But PCOS is also associated with conditions that can affect a woman's health beyond the reproductive years. Even though the exact cause of PCOS is unknown but environmental factors such as dietary habits plays an important role in prevention and treatment and also the lifestyle modifications are the most important therapeutic strategies in these pateints.

When a girl changes into women, her nutritional need changes to support growth and development. Approximately 1-5 % of women suffer from weight related amennorrhea because many girls with delayed puberty are relatively thin during adolescence. It has been suggested that a certain critical body weight is required for onset of cyclical ovarian activity.

We had a chance to do a camp study and during that study we found a very startling data about the girls of adolescent age group. We found that most of the girls were nutritionally deficit and also those girls with this deficiency had some or other problems related to irregularity of menstruation. Through this health camp we get a chance to know the current status of our society. These girls who are going to be the future women to restore the fertility of the society and if these girls in their growing period will not recieve the good nutrition as required for their healthy reproductive growth then it is the very alarming situation for future. Because we all know that women being the root cause of progeny, utmost care should be given to protect her from any ailments

that affect her motherhood. And in today's scenario we are observing that PCOD is one of the conditions affecting this unique capacity of women.

PCOD is probably the most common hormonal abnormality in women of reproductive age and certainly a leading cause of infertility. In Ayurvedic classics there is no direct mentioning of this disease, rather symptoms are found under various diseased conditions at various references i.e. menstrual irregularities are described under the broad heading of ashtarvadoshti, while the description of infertility due to anovulation is scattered. Kashyapa Samhita mentioned pushpaghni jataharni related to infertility due to anovulation.

## II. AIMS AND OBJECTIVE

- To assess nutritional status of female of young age group.
- To assess any new trend in terms of diseases in adolescent females.

## III. MATERIAL AND METHODS

- BMI Card index was used whose parameters are Height and Weight.
- Assessment of nutritional status through health camp check-up.
- Questionnaire related to youth wellbeing.
- Hemoglobin %

## IV. OBSERVATION

All the girls examined in camp were observed with nutritional deficit and maximum of those females were observed with symptoms of PCOD. Girls who were more nutritionally deficient were observed with more chances of having PCOD i.e. number of cysts present in their ovary were more and vice-versa as observed in their USG report.

S.No.	Observation of Patients	Observed Value
1.	Total Number of Patients	100
2.	Number of Patient with Low Hb	80
3.	Number of Patient with Irregular Menstruation with Low BMI	75
4.	Number of Patients with Positive Scan Report of PCOS	60

## V. DISCUSSION

PCOS is a lifestyle disorder associated with undue dietary intake, deskbound lifestyle, stress and some environmental factors, etc, but through this study we found that somewhere nutritional deficiency is also playing a very decisive role for development of this ailment. We are very much familiar with the term Rasa dhatu Kshaya, and in our Ayurveda Nutritional deficiency is nothing but Rasa Dhatu Kshaya. Hence we can correlate that, Rasa Dhatu Kshaya can affect the stanya and artava additionally as they are the Upadhatu of Rasa dhatu. The physiological system involved in PCOS as per modern and Ayurveda Science are as follows:

### Ayurveda

- Rasa Dhatu Kshaya
- Stanya Dushti
- Artava Dushti

### Modern Correlation

- Nutritional Deficiency
- Breast Anomaly
- Menstrual difficulty, Uterine function anomaly

PCOS is a condition where a hormonal imbalance affects follicular growth during the ovarian cycle causing the affected follicles to remain in the ovary. The retained follicles change into a cyst and with each ovarian cycle a new cyst is formed leading to multiple ovarian cysts.

When not getting proper nutrition, so no proper metabolism hence ahararasa produced will not nourish dhatus properly. The first dhatu is Rasa Dhatu and its Upadhatu is Raja, here we will consider raja as artava (menstrual flow) so if Rasa Dhatu is not nourished properly it will lead to **Artava Kshaya / Nashta Artava** which is the **most common symptom in PCOS patients**. And as we all know that anovulation is one of the causes of this multiple cyst formation. And the complete process of ovulation is governed by vata with process of

pravartana (release, expel). Because of this sort of action ovum escapes from the ovary and ovulation takes place. This whole activity is 'dhatu vyuhakara' – function of vata. And the process of pravartana is governed by **Apana Vayu** as mentioned by acharyas as a prakrta karma of Apana Vayu.

So, coming to next aspect of this concept we are observing here that as the dhatus are not being nourished properly it will lead to Vata Prakopa and that too majorly affected vata is apana vayu and the major dhatu kshaya is of Rasa Dhatu . Hence we can effortlessly observe **vikriti of apana vayu** which is seen in **rasa dhatu** is affecting the process of ovulation ie **pravartana ( release of ovum)** and this process further leads to development of various symptoms of PCOS. Thus, this apana vayu vikriti is due to Rasa Dhatu Kshaya which is due to low nutritional status and so is the **main algorithm** of this survey study.

## VI. CONCLUSION

Kashyapa has given a very beautiful comparison between the unopened flower bud which has fragrance in its core but because of its undeveloped condition it is not evident. So it is the case with bala (girl) also which attains maturity with kala (time). The scientific reason given by kashyapa in the same context is that as long as not all the dhatus of female body are nourished completely with nutrition they do not divert themselves to the yoni. Hence this maturity is achieved only after all the dhatus (tissues) are paripurna (matured). These events summarize the cause of expression of physical maturity characters as vayu parinamata and kalasapekshata.

Hence we conclude through this study that if we look after the female child in early age which still lies in kaphaja period with maintaining the proper nutrition in their early age we can assume that definitely the incidence of PCOS may reduce.

\* By seeing the camp report, question came to my mind that why these adolescent females inspite of getting Mid- Day meal from government are undernourished?

\* So by this paper I want to put a question to government that if in this single camp we are observing such an alarming rate of adolescent girls suffering from PCOS due to low BMI along with some other causes, hence government need to take attention on these issues similarly the way they had started Mid-Day meal. Government need to put an attention towards girls uterine and vaginal health also because these females are going to be the fertile females after 10 year span of time .Hence we humbly request our governing authority to include Rasa Dhatu Poshaka ahara in Mid Day Meal Programme. Some examples of these ahara are shatavari, ashwagandha, amalaki, amruta etc.

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