

Study of Premenstrual Syndrome and its association with ABO Blood groups in 1st year girl students of V.S.S. Medical College.

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Abstracts-Now a days due to faulty life style & environmental change the Incidence of premenstrual syndrome is increasing in adolescent girls. Adolescent phase is a crucial phase in the reproductive age of female. The chance of Premenstrual syndrome is highest during the adolescent phase. The premenstrual syndrome may have some antigenic relation with ABO blood group. Hence the study is selected to establish the association between ABO Blood groups with premenstrual syndrome. Written consent of fifty girls students (1st MBBS) are taken before study. They are supplied with questionnaires about the symptoms of premenstrual syndrome after knowing their blood groups. Data are analyzed. A, B, O, Group have variable symptom, But AB blood group is having no symptom. Result encouraging and suggest that, O blood group has significant percent headache & abdominal pain. Further study is required to establish antigenic genetic relation.

Key word-premenstrual syndrome, Blood group ABO, adolescent phase, antigenic relation.

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I. Introduction

Prosperity of a nation is reflected in the strength of its human resources, and welfare states all over the world aim to ensure the well-being of their populations in order to remain in the forefront of development at all times [1]. Pre menstrual syndrome is the Major Clinical Problem in the world especially more common in India in female. It has a Direct and Indirect Impact on the people which are more common In Adolescent Girls. Adolescence is a crucial phase of growth in the life cycle of an individual. In India, about one-fourth (27.7%) of the female population falls in the 15-29 years age-group.^[2] This age is a transition phase of life associated with spurt of physical, mental, emotional, and social development. Premenstrual dysphonic disorder (PMDD) is the severe form of premenstrual syndrome (PMS). The psychological symptoms are irritability, emotional lability, anxiety, and depression. Somatic symptoms include edema, weight gain, mastalgia, headache, syncope, and paresthesia. They appear about 1 week before the onset of menses and disappear soon after onset of menses[3]. Menstruation is the periodic endometrial shedding & bleeding that correlate ovarian cyclical ovulation. Regular menstruation without any discomfort is one of the sign of mature and sound reproductive health. Menstruation related symptom & diseases are common gynecological disease, that not only affect the health & quality of life of female but also increase the potential risk of gynecological disease[4]. In recent year research has increasing focus on the genetic factor that cause menstrual disorder. Taylor teal found the polymorphism of progesterone receptor gene were associated with young menarche & short menstrual cycle. (5) The probability of pre menstrual syndrome has been found to be higher in identical twin then fraternal twin (.6) Mutation of FSH receptor gene lead to amenorrhea, infertility, Premature ovarian failure 7) This finding indicates there is a genetic link with menstrual disorder. The ABO blood group gene also probably a cause of menstrual disorder. (9) Premenstrual young girl are the main culprit of symptom. The main symptom of, lower abdominal pain, vomiting, headache, anxiety, insomnia, edema, legisharassing. Blood group antigen A, B, O may got some genetic correlation in this regard. This study is done to establish any association between ABO blood group and premenstrual syndrome. In the present study, I have attempted to evaluate the antigenic relation to take preventive measure for the disease.

II. Material & Methods

A cross-sectional study was done among undergraduate female students. Study was conducted in the physiology dept of VIMSAR, Burla (July 2013-Dec 2013). The study sample comprised of 50 numbers of girl students of 1st MBBS within the age group of 17 years to 25 years -are selected for study.

PROTOCOL-

All the 50 girl students supplied with structured questionnaires in english regarding,

1. Name, age, blood group, height, weight of subject (sociodemographic data.)
2. Menstrual history of self, duration of flow/total duration, regularity of cycle

3. History of symptom-Lower abdominal pain, vomiting, headache, anxiety, menorrhagia
 4. Students are asked to give the feedback in written in the same question paper
 5. Prior consent of subjects are taken into consideration.
- The collected data analyzed statistically

III. Result

Table no 1: Age Distribution

Years	Frequency
18-19	20
20-21	26
22-23	3
24-25	1
TOTAL	50

Table no 2: Blood group Distribution

Blood Group	Frequency
A	12
B	15
AB	01
O	22
Total	50

Table no3: Symptom Distribution

Symptom	Frequency	Percentage
Lower abdominal pain	37	61.6
Vomiting	03	5.0
Headache	08	13.3
Anxiety	10	16.6
Menorrhagia	2	3.3

Table no 4: Symptom frequency in relation to blood group

Blood Gp	Abdominal pain	Vomiting	Headache	Anxiety	Menorrhagia.
A	7	0	0	1	2
B	14	1	0	3	3
AB	0	0	0	0	0
O	13	2	4	3	0
Frequency	44	3	4	7	5

Table no 5: Percentage of symptom in Different Blood group

Blood Gp	Abdominal pain %	Vomiting %	Headache %	Anxiety %	Menorrhagia %
A	16	0	0	14	40
B	31	33	0	42	60
AB	0	0	0	0	0
O	59	66	100	42	0

IV. Discussion

Highest frequency is found for age group 20-21 (Table-I), low frequency for 24-25 age group. Highest number of blood group is for O & lowest for AB blood group-Table II. Among five prominent symptoms the frequency of lower abdominal pain is 37 -highest. Table III. Among five prominent symptom the frequency of menorrhagia is lowest that is 2-Table III. Out of five prominent symptoms A,B,O group show -lower abdominal pain as major symp. Table-IV. AB blood group show no prominent symptom-Table IV. Headache is prominent for O blood group-table IV. Vomiting is prominent in O blood group. 59% complain LAP those having O blood group. 31% complain LAP-having blood group. 66% complain vomiting in O blood group & 33% in b blood group. 100% of O blood group complain headache. 42% complain anxiety in B & O blood group .60% complain menorrhagia B blood group. 40% complain menorrhagia in A blood group

V. Conclusion

Although most women experience minor physical and emotional changes before menses about 10% of women have severe symptoms that impede daily life. Although no study directly links PMS with blood group many of the common symptoms are more typical for blood group A,B,O especially at high stressful conditions. Women having A,B,O blood group should impart health education for management of symptoms. Intervention of early treatment to the subject is very important. Single nucleotide polymorphism, located near ABO gene,

plays an important role in etiology of menstrual disorder. premenstrual syndrome, tension state is psychosomatic in nature. Excess of oestradiol in relation to progesterone, cause fluid and salt retention. Secondary aldosterinism, from activation of RAS mechanism cause edema. Imbalance in hypothalamus pituitary ovarian axis has also been a supportive factor. Further study is required to confirm the ABO Antigenic relation with Pre menstrual syndrome.

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