Understanding Environmental and Social Reasons Towards Abnormal Menstruation Cycle in Indian Women

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Abstract

The human female reproductive system is by far the most complex biological system, abnormal menstruation cycles is directly associated with type 2 diabetes and they have shown to be associated with cardiovascular disorders as well. The underlying reasons for abnormal menstruation cycle in Indian women is just not stress, birth control pills and or disease symptoms but signs of social and environmental factors are clearly evident now in form or traditional societal practices. This paper aims to understand the abnormal behavior of the menstruation cycle in Indian women.

Keyword: Environmental and Social Reasons; Abnormal Menstruation Cycle; Indian Women

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1. Introduction

1.1 The Social Aspects

Today while most women and young girls in India are being told menstrual cycle that is now lost in our modern environment .These are my take on SOCIAL REASON for such practices. Women are more likely than men to experience sexual harassment, occupational or work-related stress toxic work environments-lack of autonomy, difficult relationships among coworkers , management bullying and lack of opportunities or motivation to advancement in once. Skill depression or emotional alertness certain forms of contraception pressure can also result in irregular cycles. Emotional stress: severe emotional stress in cases of exams, loss of job, loss of someone dear. In minority of cases there might be involuntary detention or involuntary a mixture of acute dysfunctional behaviors that may resolve in SHORT PERIODS

1.2 The Bio Aspects

The female reproductive system is a synchronized hormonal process that controls the fertility and reproductive outcomes. There are number of host and environmental factors that affect the menstrual cycle , certain factors that disturbs the menstruation cycle in woman increases their susceptibility towards other reproductive disorders including cancer [5,10]. Air Pollution is one of the major cause since pollutants in the air such as smoke shares a long list of toxic components, some changes in reproductive health of the woman has been visualized due to continuous exposure to smoke.

Recent studies showed that environmental tobacco smoke (ETS) increases the risk of first tri-semester miscarriages, reduced birth-weight of infants, preterm births, intrauterine fetal growth retardation and decreased fetal head circumference in pregnant females [8,4,7,2]. Cigarette smoke is also responsible for the increased incidence of various menstrual cycle abnormalities that includes Dysmenorrhea in premenopausal women [9,11].

Moreover, maternal exposure to air pollution increases the risk of various adverse pregnancy outcomes that includes selected cardiac defects and oral cleft formation in the growing fetus resulting in early childhood defects[3,6,12]..Recent studies also reveals the fact of continuous exposure of pregnant women towards biomass smoke during their daily household cooking that results in reduced infant birth weight [1,13].

During a survey, we have investigated the effects of smoke on menstrual cycle and reproductive outcome in a group of premenopausal women from Northern India (Uttar Pradesh) who stepped outside their homes and took public transportation for the past five years or more and compared with other group of same aged women who reside in pollutant free environment.

2. Methodology

2.1 Collection of social Data

Healing with affirmations for irregular menstrual cycle. Affirmations / mind re - programming is used for healing by many alternate healing modalities like - Reiki, Past Life Regression, for attaining radical and instant results. We know that brain controls the whole body and not vice versa. So AFFIRMATION FOR IRREGULAR MENSTRUAL CYCLE due to social / environmental reasons- "I ACCEPT MY FEMININE PRINCIPLE. " Affirmation for irregular menstrual cycle due to mental stress - "I DELIVER IN SYNCRONICITY WITH THE RHYTHM OF THE UNIVERSE"

2.2 Experiment

Taken 30 women of ages 18-42 , for a time of 60 days.. Asked questions -- "How well do you feel accepted a s a women in the society and with your family? " Do you feel pressured by the men folk in your family? Do you have to abide by the decisions of your father/ brother / husband / son? "Do you accept yourself as a women and your womanhood happily? Are you able to express yourself and feel safe, secured, accepted and progress in the Indian environment? "Did u have to curb / stop yourself often , because of being a women in India ? "Do you Indian society offers a very safe, progressive, environment for the women?

In minority of cases there might be involuntary detention or involuntary a mixture of acute dysfunctional behaviors that may resolve in SHORT PERIODS.

2.3 Collection of menstrual cycle data

The five menstrual cycle characteristics in women due to the effect of prolonged exposure to smoke during regular transportation are i. short cycles , ii. Long cycles (oligomenorrhea), iii. Irregular cycles, iv. Missed periods, and v. Inter menstrual bleeding. These reports were evaluated from a self questionnaire through personal interview by the trained female members of the research team the protocols [3]. The first three characteristics of menstrual cycle was found to be the average length of menstrual cycle in the past 12 months such as '24 days or less' was categorized as short cycle, 'more than or equal to 36 days' as long cycles, and 'too irregular to breastfeeding, or using birth control pills' is yes, then it was categorized as missed period. When bleeding or spotting was present between periods in the last 12 months, it was characterized as Intermenstrual bleeding. Women whose cycles lasted 25-35 days composed the comparison group for the analyses of short,long, and irregular cycles. .

2.4 Collection of data on reproductive outcomes

A self-reported data was collected from spontaneous abortion and frequency of abortion through personal interview by female members of the research team following guidelines [6,1] On the basis of their last menstrual period ,enrolled women were asked to recall all their pregnancies and the number of weeks when she was pregnant. To determine the incidence of early and late-term abortions, Gestational age during spontaneous abortion and its frequency were noted and it was classified into a subgroups of <12 weeks and 12-19 weeks of Gestation. . Still birth was defined as the birth of an infant that showed no sign of life after 27 gestational weeks and/or a birth weight of 1000g [2,8]. The information of Birth weight of the newborn was obtained from

mother asking her to recall her last live delivery. The data were stratified into <2,500g (low), 2,500-3,500g (normal) and >3,500g (overweight) for further analysis.

3. Results

Analyzing Social outcomes

Social results were as follows:

6 people showed no improvement

6 people showed 50 percent improvement in menstruation cycles and felt happier and relaxed.
18 showed positive results with their cycles becoming regular, and less discomfort in PMS. They felt mentally relaxed and very confident to take on life and tackle all the various issues that they faced.

The typical answers were

✓ No, I was / am not accepted happily by my family members. They would have preferred a boy. A lot of discriminations has to be tolerated

✓ In aspects of career choices, my brother was given 1 st preference and I had to compromise.

✓ Individual encouragement not given as a wife and expected to compromise easily made to feel very conscious as a women.

✓ Not allowed to roam around freely and barred from living in a free spirited manner just because of being a women made to hide and invalidate my feelings , and they were considered unimportant and useless treated as a liability by the family and not an asset that multiplies

✓

A lot of worship traditions also do not encourage women. So always felt dispensable / secondary

Assay of reproductive hormones in serum by ELISA

The Blood present in the no-additive vacationer was allowed to clot and serum was collected.

Enzyme-Linked Immunosorbent Assay (ELISA) was used for measurement of the reproductive hormones viz. Luteinizing hormone (LH), follicle stimulating hormone(FSH), 17-OH-Progesterone, 17beta-Estradiol and prolactin in serum.

The following ELISA kits of IBL, Hamburg, Germany were used:

I) LH- kit # RE52101 with lowest detection level of 1.27miu/ml, ii) FSH- kit # RE52121 with lowest detection level of0.856miu/ml, iii) 17-OH-Progesterone- kit # RE52071 with lowest detection level of 0.03ng/ml, iv) 17beta-Estradiol- kit # RE52041 with lowest detection level of 9.714 pg/ml,and v) Prolactin- kit # RE52131 with lowest detection level of 0.35 ng/ml. The assays were performed by following the procedures that was recommended by the manufacturers.

Serum anti-cardiolipin antibodies (acl) igg and igm

With the help of ELISA test by using the commercially available kit(The Binding Site Ltd, Birmingham, UK; kit # MK 071) ,presence of serum acl igm and igm were measured. The lowest detection limit for igg is 1GPL U/ml and for igm is 0.6 MPL U/ml. The cut off values for acl igg was set at10 IU/ml and 15 IU/ml for igm that was based on the 99 th percentile value of our earlier study on100 pre-menopausal normal women which conforms with the report [14].

Statistical analysis

All data are expressed as mean standard deviation. By using the generalized estimating equations (gees) the collected data were processed and analyzed in EPI info 6.0 and SPSS (Statistical Package for Social Sciences) 10.0 software (SPSS Inc., Chicago, Il, USA) Logistic regression analysis .These collected information was used to examine the relationship between the measured outcome and possible confounders such as PM10 levels.

For continuous variables, Spearman's rank test was done and for absolute variables, Chi-square test was done. $P<0.05$ was considered as significant.

4. Conclusion

This study has shown that menstruation is not only associated with hormonal imbalance but also associated with the social as well as environmental factors. After healing with the factors for irregular menstrual cycle, it shows that social and environmental factors are the primary cause As research continues we also assessed that in some women air pollution also results in the intermenstrual bleeding and missed periods. Women were uncomfortable that their conduct appeared to be governed by the social rules.

Cumulative exposure to high levels of particulate pollutants from biomass smoke causes hazardous affect to pregnant women that results in the form of several abortion cases. Smoke emitted from biomass contains a high level of health-damaging particulate matters that affects the menstrual cycle and reproductive outcome of the women. During a survey, we have noticed the affect of cigarette smoke in premenopausal women that lead to many abnormal menstrual cycle that includes Dysmenorrhea. After these studies we came to the conclusion that some steps should be taken to minimize the exposure of women towards toxic pollutants.

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