

## To Study the Effect of Anemia on Premenopausal Women

NISHA BANCHHOR\*<sup>1</sup>, RUPAM AJEET YADAV<sup>2</sup> AND RESHMA LAKESH<sup>3</sup>

<sup>1</sup>Research Center- Government Dr. Waman Wasudev Patankar Girls PG College, Durg (C.G.) India  
(University-Pt. Ravishankar Shukla University, Raipur, Chhatisgarh)

<sup>2</sup>Bhilai Mahila Mahavidyalaya, Hospital Sector, Bhilai Nagar (C.G.) India

<sup>3</sup>Government Dr. Waman Wasudev Patankar Girls PG College, Durg (C.G.) India

### ABSTRACT

Menopause is a normal biological process; it is not a disease. Although it is a natural process, it Causes many physiological changes. A female remains in reproductive stage from puberty to menopause. Menopausal transition includes three stages (1) Perimenopause- which starts before menopause. It may be of 3 to 5 years duration. (2) Menopause -Is about 12 months period after the last menstrual cycle. (3) Post menopause- Period after menopause. During pre-menopausal (peri-menopausal) period body produces less estrogen and many symptoms are produced. This study is an attempt to find out the effect of Anemia on Menopausal symptoms of women in Premenopausal stage. 45 premenopausal women of Bhilai township were selected for the study. Out of them 9 were suffering from Anemia. A significant association was observed between lethargy, irritation, cold sweat, Nervousness, mood swings, muscles pain and anemia in perimenopausal women.

**Key Words :** Premenopause, Anemia

### INTRODUCTION

Middle age is the turning point in one's life because it brings many physiological changes. Premenopause occurs many years before menopause. During this period women experience many common symptoms of Menopause. It is the time to prepare oneself for Menopause.

During Perimenopause women usually experience changes in their monthly cycles. Menstrual flow may become irregular either heavier or lighter, this transitional phase usually last for 7 years but can continue for more year also. Premenopausal women are those who still have menstrual cycle with slight changes in length of cycles.

#### **Aim:**

This study is an attempt to find out the effect of Anemia on menopausal symptoms of women in Premenopausal stage.

#### **Hypothesis:**

Premenopausal symptoms are directly associated with state of anemia.

#### **Review and literature :**

The world health organization define anemia as hemoglobin concentration below 12 g/dl in women.

Saydam *et al.* (2017) found that anemia is associated in women below 50 years of age who have not entered Menopause.

Bernardi *et al.* (2016) conducted study and found that anemia in pre-menopausal state is associated with heavy or very heavy menses.

Nayak *et al.* (2012) conducted study on 209 premenopausal women and found that physical and psychosocial symptoms were more prevalent than vasomotor and sexual symptoms.

Ahuja (2016) conducted study on age of menopause and found that age of Menopause in India is less than

western countries. Her study denotes that fertility potential of Indian women decreases early. So preventive menopauses should be taken earlier.

### METHODOLOGY

Selection of samples – the study is cross sectional in nature and is carried out on premenopausal women. Women undergoing Hormone therapy were not included in this study.

Data collection- Data collection was done by a structured interview method using a well-designed pre tested questionnaire. Hemoglobin percent was taken as a secondary data.

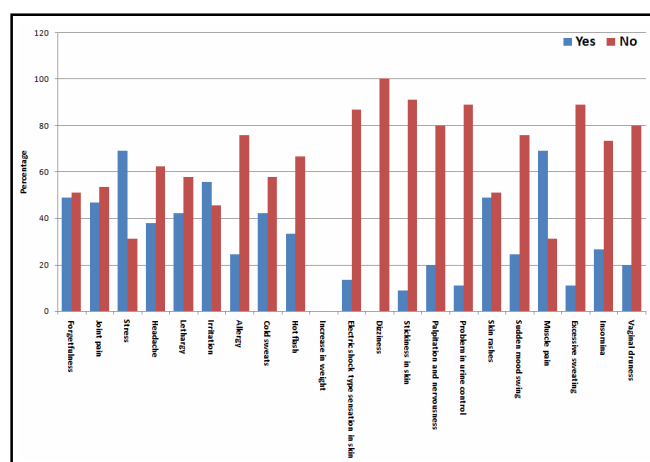


Fig. 1 : Bar Chart Showing Menopausal Symptoms in Pre-menopausal Women

### RESULTS AND DISCUSSION

#### Pre-Menopausal Group: Menopausal Symptoms in Pre-menopausal Women with Reference to Anemia:

A symptom assessed forget fullness Loss of memory in pre-menopausal Anaemic women yielded non-significant result. Frequency distribution reveals that among 22 subjects reported that they forget things, 22.7% were anaemic while 77.3% were non-anaemic. Among 23 subjects who reported that they do not forget things,

Anaemiaχ	Do you think you are forgetting?				Total
	Yes		No		
	N	%	N	%	
Yes	5	22.7	4	17.4	9
No	17	77.3	19	82.6	36
Total	22	100.0	23	100.0	45

Fisher Exact Test = 0.72, p>.05

17.4% were anaemic while 82.6% were non-anaemic. The Fisher exact test statistics showed no association between anaemia and symptom of forgetfulness among pre-menopausal women (Table 1).

Joint pain in pre-menopausal anaemic and non anaemic women showed non-significant result. Frequency distribution reveals that among 21 subjects reported that they have joint pain, 14.3% were anaemic while 85.7% were non-anaemic. Among 24 subjects reported that they do not have joint pain, 25% were anaemic while 75% were non-anaemic. The Fisher exact test statistics showed no association between anemia and joint pain in pre-menopausal women (Table 2).

Anaemiaχ	Do you suffer from joint pain?				Total
	Yes		No		
	N	%	N	%	
Yes	03	14.3	06	25.0	9
No	18	85.7	18	75.0	36
Total	21	100.0	24	100.0	45

Fisher Exact Test = 0.46, p>.05

Stress in pre-menopausal women in relation to anaemia yielded non-significant result. Frequency distribution reveals that among 31 subjects reported that they have stress, 16.1% were anaemic while 83.9% were non-anaemic. Among 14 subjects reported that they are not stressed, 28.6% were anaemic while 71.4% were non-anaemic. The Fisher exact test statistics showed no association between anaemia and stress in pre-menopausal women (Table 3).

Anaemiaχ	Do you feel stress during this time?				Total
	Yes		No		
	N	%	N	%	
Yes	5	16.1	4	28.6	9
No	26	83.9	10	71.4	36
Total	31	100.0	14	100.0	45

Fisher Exact Test = 0.42, p>.05

Headache, a symptom assessed in pre-menopausal women in relation to anaemia yielded non-significant result. Frequency distribution reveals that among 17 subjects reported that they have frequent bout of headache, 29.4% were anaemic while 70.6% were non-anaemic. Among 28 subjects reported that they do not experience headache, 14.3% were anaemic while 85.7% were non-anaemic. The Fisher exact test statistics

showed no association between anaemia and headache in pre-menopausal women (Table 4).

**Table 4 :**

Anaemia $\chi$	Do you experience symptoms of headache?				Total
	Yes		No		
	N	%	N	%	
Yes	5	29.4	4	14.3	9
No	12	70.6	24	85.7	36
Total	17	100.0	28	100.0	45

Fisher Exact Test = 0.26, p>.05

Lethargy, a symptom assessed in pre-menopausal women in relation to anaemia yielded significant result. Frequency distribution reveals that among 19 subjects reported that they have lethargy, 36.8% were anaemic while 63.2% were non-anaemic. Among 26 subjects reported that they do not experience lethargy, 7.6% were anaemic while 92.4% were non-anaemic. The Fisher exact test statistics showed significant association between anaemia and lethargy among pre-menopausal women (Table 5).

**Table 5 :**

Anaemia $\chi$	Do you feel lethargic?				Total
	Yes		No		
	N	%	N	%	
Yes	7	36.8	2	7.6	9
No	12	63.2	24	92.4	36
Total	19	100.0	26	100.0	45

Fisher Exact Test = 0.024, p<.05

Irritation, a symptom assessed in pre-menopausal women in relation to anaemia yielded significant result. Frequency distribution reveals that among 25 subjects reported about irritation, 32% were anaemic while 68% were non-anaemic. Among 20 subjects reported that they do not experience irritation, 5% were anaemic while 95% were non-anaemic. The Fisher exact test statistics showed significant association between anaemia and irritation among pre-menopausal women (Table 6).

**Table 6 :**

Anaemia $\chi$	Do you feel irritated...?				Total
	Yes		No		
	N	%	N	%	
Yes	8	32.0	1	5.0	9
No	17	68.0	19	95.0	36
Total	25	100.0	20	100.0	45

Fisher Exact Test = 0.035, p<.05

Allergy, a symptom assessed in pre-menopausal women in relation to status of anaemia yielded non-significant result. Frequency distribution reveals that among 11 subjects reported that they suffer from allergy, 9.1% were anaemic while 90.9% were non-anaemic. Among 34 subjects reported that they do not have an allergy, 23.5% were anaemic while 76.5% were non-anaemic. The Fisher exact test statistics showed no association between anaemia and allergy in pre-menopausal women (Table 7).

**Table 7 :**

Anaemia $\chi$	Do you have an allergy in the beginning?				Total
	Yes		No		
	N	%	N	%	
Yes	1	9.1	8	23.5	9
No	10	90.9	26	76.5	36
Total	11	100.0	34	100.0	45

Fisher Exact Test = 0.41, p>.05

Cold sweats, a symptom assessed in pre-menopausal women in relation to anaemia yielded significant result. Frequency distribution reveals that among 19 subjects reported about cold sweats, 36.8% were anaemic while 63.2% were non-anaemic. Among 26 subjects reported that they do not experience cold sweats, 7.7% were anaemic while 92.3% were non-anaemic. The Fisher exact test statistics showed significant association between anaemia and cold sweats among pre-menopausal women (Table 8).

**Table 8 :**

Anaemia $\chi$	Do you experience cold sweats?				Total
	Yes		No		
	N	%	N	%	
Yes	7	36.8	2	7.7	9
No	12	63.2	24	92.3	36
Total	19	100.0	26	100.0	45

Fisher Exact Test = 0.0035, p<.05

Hot flashes, a symptom assessed in pre-menopausal women in relation to anaemia yielded non-significant result. Frequency distribution reveals that among 15 subjects reported that they suffer from hot flashes, 20% were anaemic while 80% were non-anaemic. Among 30 subjects reported that they do not feel hot flashes, 20% were anaemic while 80% were non-anaemic. The Fisher exact test statistics showed no association between anaemia and hot flashes in pre-menopausal women (Table 9).

**Table 9 :**

Anaemia $\chi$	Do you experience hot flashes?				Total
	Yes		No		
	N	%	N	%	
Yes	3	20.0	6	20.0	9
No	12	80.0	24	80.0	36
Total	15	100.0	30	100.0	45

Fisher Exact Test = 1.0, p>.05

Weight gain, a symptom assessed in pre-menopausal women in relation to status of anaemia yielded non-significant result. Frequency distribution reveals that among 30 subjects reported about the weight gain, 16.7% were anaemic while 83.3% were non-anaemic. Among 15 subjects reported no change in weight, 26.7% were anaemic while 73.3% were non-anaemic. The Fisher exact test statistics showed no association between anaemia and weight gain in pre-menopausal women (Table 10).

**Table 10 :**

Anaemia $\chi$	Does your weight increase ...?				Total
	Yes		No		
	N	%	N	%	
Yes	5	16.7	4	26.7	9
No	25	83.3	11	73.3	36
Total	30	100.0	15	100.0	45

Fisher Exact Test = 0.45, p>.05

Electric shock type sensation in skin, a symptom assessed in pre-menopausal women in relation to anaemia yielded non-significant result. Frequency distribution reveals that among 6 subjects reporting electric shock type sensation in skin, 33.3% were anaemic while 66.7% were non-anaemic. Among 39 subjects reported otherwise, 17.9% were anaemic while 82.1% were non-anaemic. The Fisher exact test statistics showed no association between anaemia and electric shock type sensation in pre-menopausal women (Table 11).

**Table 11 :**

Anaemia $\chi$	Do you feel electric shock type sensation in skin?				Total
	Yes		No		
	N	%	N	%	
Yes	2	33.3	7	17.9	9
No	4	66.7	32	82.1	36
Total	6	100.0	39	100.0	45

Fisher Exact Test = 0.58, p>.05

Anaemia and symptom of dizziness was not found to be associated with each other because none of the premenopausal women reported that they feel dizzy during this time (Table 12).

**Table 12 :**

Anaemia $\chi$	Do you feel dizziness during this time?				Total
	Yes		No		
	N	%	N	%	
Yes	-	-	9	20.0	9
No	-	-	36	80	36
Total	-	-	45	100.0	45

Fisher Exact Test =

Stickiness in skin during period, a symptom assessed in pre-menopausal women in relation to status of anaemia yielded non-significant result. Frequency distribution reveals that among 4 subjects reporting stickiness during periods, 25% were anaemic while 75% were non-anaemic. Among 41 subjects reported otherwise, 19.5% were anaemic while 80.5% were non-anaemic. The Fisher exact test statistics showed no association between anaemia and feeling of stickiness during periods among pre-menopausal women (Table 13).

**Table 13 :**

Anaemia $\chi$	Do you feel stickiness in skin during your period?				Total
	Yes		No		
	N	%	N	%	
Yes	1	25.0	8	19.5	9
No	3	75.0	33	80.5	36
Total	4	100.0	41	100.0	45

Fisher Exact Test = 1.

Sudden feeling of palpitation and nervousness, a symptom assessed in pre-menopausal women in relation to anaemia yielded significant result. Frequency distribution reveals that among 9 subjects reporting this symptom, 77.7% were anaemic while 22.3% were non-anaemic. Among 36 subjects reported otherwise, 25% were anaemic while 75% were non-anaemic. The Fisher exact test statistics showed significant association between anaemia and sudden feeling of palpitation and nervousness among pre-menopausal women (Table 14).

**Table 14 :**

Anaemia $\chi$	Is there a sudden feeling of palpitation and nervousness?				Total
	Yes		No		
	N	%	N	%	
Yes	7	77.7	9	25.0	9
No	2	22.3	27	75.0	36
Total	9	100.0	36	100.0	45

Fisher Exact Test = 0.0057, p<.05

Urine control during periods, a symptom assessed in pre-menopausal women in relation to anaemia yielded non-significant result. Frequency distribution reveals that among 5 subjects reporting this symptom, 40% were anaemic while 60% were non-anaemic. Among 40 subjects reported otherwise, 17.5% were anaemic while 82.5% were non-anaemic. The Fisher exact test statistics showed no association between anaemia and urine control during periods among pre-menopausal women (Table 15).

**Table 15 :**

Do you have problem in urine control during this period?					
Anaemia $\chi$	Yes		No		Total
	N	%	N	%	
Yes	2	40.0	7	17.5	9
No	3	60.0	33	82.5	36
Total	5	100.0	40	100.0	45

Fisher Exact Test = 0.25

Skin rashes, a symptom assessed in pre-menopausal women in relation to status of anaemia yielded non-significant result. Frequency distribution reveals that among 22 subjects reporting this symptom, 13.6% were anaemic while 86.4% were non-anaemic. Among 23 subjects reported otherwise, 26.1% were anaemic while 73.9% were non-anaemic. The Fisher exact test statistics showed no association between anaemia and skin rashes during periods among pre-menopausal women (Table 16).

**Table 16 :**

Do you observe skin rashes?					
Anaemia $\chi$	Yes		No		Total
	N	%	N	%	
Yes	3	13.6	6	26.1	9
No	19	86.4	17	73.9	36
Total	22	100.0	23	100.0	45

Fisher Exact Test = 0.45

Sudden mood swing, a symptom assessed in pre-menopausal women in relation to anaemia yielded significant result. Frequency distribution reveals that among 11 subjects reporting this symptom, 45.5% were anaemic while 54.5% were non-anaemic. Among 34 subjects reported otherwise, 11.8% were anaemic while 88.2% were non-anaemic. The Fisher exact test statistics showed significant association between anaemia and mood swings during periods among pre-menopausal women.

Muscle pain during menstrual cycle, a symptom assessed in pre-menopausal women in relation to anaemia yielded significant result. Frequency distribution reveals that among 31 subjects reporting this symptom, 29.1% were anaemic while 70.9% were non-anaemic. Among 14 subjects reported otherwise, none of the subjects were anaemic. It shows that pre-menopausal women anaemic women always experience muscle pain during periods (Table 17).

**Table 17 :**

Do you observe mood swings without reason?					
Anaemia $\chi$	Yes		No		Total
	N	%	N	%	
Yes	5	45.5	4	11.8	9
No	6	54.5	30	88.2	36
Total	11	100.0	34	100.0	45

Fisher Exact Test = 0.027,  $p < .05$

Excessive sweating during menstrual cycle, a symptom assessed in pre-menopausal women in relation to status of anaemia yielded non-significant result. Frequency distribution reveals that among 5 subjects reporting this symptom, 20% were anaemic while 80% were non-anaemic. Among 40 subjects reported otherwise, 20% were anaemic while 80% were non-anaemic. The Fisher exact test statistics showed no association between anaemia and excessive sweating during menstrual cycle among pre-menopausal women (Table 18).

**Table 18 :**

Do you have problem of sweating during menstrual cycle?					
Anaemia $\chi$	Yes		No		Total
	N	%	N	%	
Yes	1	20.0	8	20.0	9
No	4	80.0	32	80.0	36
Total	5	100.0	40	100.0	45

Fisher Exact Test = 1

Insomnia, a symptom assessed in pre-menopausal women in relation to status of anaemia yielded non-significant result. Frequency distribution reveals that among 12 subjects reporting insomnia, 8.3% were anaemic while 91.7% were non-anaemic. Among 33 subjects reported otherwise, 24.2% were anaemic while 75.8% were non-anaemic. The Fisher exact test statistics showed no association between anaemia and insomnia among pre-menopausal women (Table 19).

**Table 19 :**

Anaemia $\chi$	Do you suffer from insomnia?				Total
	Yes		No		
	N	%	N	%	
Yes	1	8.3	8	24.2	9
No	11	91.7	25	75.8	36
Total	12	100.0	33	100.0	45

Fisher Exact Test = 0.40

Vaginal dryness, a symptom assessed in pre-menopausal women in relation to status of anaemia yielded non-significant result. Frequency distribution reveals that among 9 subjects reporting vaginal dryness, 22.2% were anaemic while 77.8% were non-anaemic. Among 36 subjects reported otherwise, 19.4% were anaemic while 80.8% were non-anaemic. The Fisher exact test statistics showed no association between anaemia and vaginal dryness among pre-menopause (Table 20).

**Table 20 :**

Anaemia $\chi$	Do you feel dryness in your vagina?				Total
	Yes		No		
	N	%	N	%	
Yes	2	22.2	7	19.4	9
No	7	77.8	29	80.8	36
Total	9	100.0	36	100.0	45

Fisher Exact Test = 1

**Conclusion :**

A significant association was observed between

lethargy, Irritation, Cold sweats, Nervousness, Mood swing and Muscle pain with Anaemia among Premenopausal Women. Symptoms of Forgetfulness, Joint pain, Skin rashes, Headache, Allergy and stickiness of skin etc. are not found to be associated with Anaemia in Premenopausal Women.

As this phenomenal is natural understanding the physiology and symptoms will help us to cope up with them more effectively and efficiently. Study at an early age helps us to plan suitable strategies to improve overall health standard with reduction in symptoms.

**REFERENCES**

Ahuja, Maninder (2016). Age of menopause & determinants of Menopause age. *J. Midlife Health*, 7(3) :126-131

Bernardi, L.A., Marissa, S.G, Carolina, A., Hannah, R. and Erica, E.M. (2016). The association between subjective assessment of menstrual bleeding and menopause of iron deficiency anemia in premenopausal African, American women, across sectional study. *BMC women have*, 16 50(2016)

Nayak, G, Kamath, A. and Rao, A. (2012). A study of quality of life among perimenopausal women in selected coastal area of Karnataka. *J. Midlife Health*, 3(2) : 71-75.

Saydam, B.K., Genc, R.E., Sarac, F. and Turfan, E.C. (2017). Prevalence of anemia and related factors among women in Turkey. *Pak J Med Sci.*, 33(2):433-438.

\*\*\*\*\*