

EFFECT OF YOGA THERAPY ON ANAEMIA IN MENORRHAGIC SUBJECTS

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Abstract: A study to assess the effect of yoga therapy on anaemia in subjects with menorrhagia was conducted at the P.A College of Engineering, Nadupadav, Mangalore. 20 subjects suffering from heavy menstrual bleeding or menorrhagia were randomly selected for this study. They were divided into two groups, 10 subjects in each group. A detailed case history of all the subjects was taken. Red Blood Cell count, Haemoglobin count, weight, BMI of all the subjects were recorded before and after the yoga therapy. The experimental group was given yoga therapy for one hour from 6.00am to 7.00am, six days per week for a period of 40 days. Yoga therapy included a series of asanas, pranayamas, meditation, and relaxation techniques. The control group was not given any of these. The result of Red blood cell and Haemoglobin test were analysed through student 't' test and have been compared for the two groups. After yoga therapy, the experimental group showed significant improvement at a level of significance $p < 0.05$ with a significant p value of **1.47E-05** in RBC and **1.46E-06** in Haemoglobin. No significant result was seen in control group. This proves that yoga therapy helps to reduce anaemia by increasing RBC and Haemoglobin levels in subjects with menorrhagia.

Keywords: Yoga Therapy, Red blood cell, Haemoglobin.

INTRODUCTION:

Menorrhagia is one of the frequently experienced problems in gynaecology. It is the condition with abnormally heavily or prolonged bleeding. In our country 16% of the women aged between 15 to 44 were diagnosed with menorrhagia. Excessive or prolonged menstrual bleeding can lead to other medical condition called anaemia i.e iron deficiency anaemia, where there will be reduction in the Red Blood Cells count, and Haemoglobin, a protein that enables RBC to carry oxygen to tissues. Iron deficiency anaemia occurs when the body tries to make up for the lost RBC by using stored iron to produce more haemoglobin which can then carry oxygen on RBC. Women with anaemic condition will have symptoms such as pale skin, tiredness, shortness of breath, headache/ dizziness, dry skin and hair, soreness of tongue, mouth, brittle nails etc.

Increasing evidence of menorrhagia has triggered studies of how yoga can help in handling the problem. Various research findings have revealed remarkable improvements of yoga therapy on Haemoglobin and RBC count. Regular practice of yoga can control menorrhagia and thus helps to overcome anaemia. This study was an attempt to know the effect of yoga therapy on anaemic condition. Yoga therapy is preventive, curative and promotive in nature. By the systematic practice of yoga, one can live healthy both physically and mentally.

OBJECTIVE OF THE STUDY: To find the effect of yoga therapy on anaemia in subjects with menorrhagia.

REVIEW OF LITERATURE:

Maharshi Patanjali defines yoga as *Yogah Cittavritti nirodhah // PYS* ¹ i.e yoga is restraining mind stuff or citta. He describes that the mental distraction is the root cause for disease and its symptoms are:

Vyadhi styana samsaya pramadasyavirati

Brantidarsanalabdhahumikatvanavasthutattvani cittavikesepaste antarayah//PYS1-30// ²

Disease, mental laziness, doubt, lack of enthusiasm, lethargy, craving for sense of pleasure, misconception, non- attainment of desired state of mind, inabilities. If any of these occurring in the mind and body, then the symptoms are seen in the following way:

Duhkahdaurmanasyangamejayatvasvassaprasvasa viksepasahabhuvah/PYS-1-31//³

According to Nathamuni's Yoga Rahasya, Women, when compared to men, have a special right to practice yoga. This is because it is women who are responsible for continuity of the lineage.⁴

Adhikaro viseshena streenam pumbyo nigadhyate'

Santhanatharu visthare streeshariram hi kaaranam// chapter I - 14

The body of women when taken over by disease fails its purpose (that of conception). Therefore, all women in this world have a special right to practice yoga.⁵

Dr. K. Krishna Sharma et al., in their "A study on the effect of yoga therapy on anaemia in women" showed that in the subjects who practiced yoga, there was significant improvement in the level of Haemoglobin, PCV, and WBC in the experimental group.

Neena Sharma, Ritu Gupta through their study on of yoga in anaemic patients got significant result in Haemoglobin and RBC in both in men and women. They concluded that yoga is a cheap and cost- effective discipline that can be added to the drugless therapy for improvement of haematological parameters in anaemic patients.

B. Ramanath, Tajuddin Shaik, M. Somasekhar Reddy conducted a randomized control study of yoga on anaemic patients in which after 3 month duration of yoga therapy, in all anaemic patients Haemoglobin percentage was increased.

HYPOTHESES: As a result of Yoga therapy

- There will be increase in haemoglobin and Red blood cell count.
- There will be reduction in the symptoms associated with menorrhagia.
- There will be improvement of quality of life.

Inclusion criteria:

- Age between 20-22 years
- Subjects with haemoglobin level 8 – 12 g/dl.
- Subjects with menstrual bleeding last more than 7 days.
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Exclusion criteria:

- Subjects with Haemoglobin level less than 7g/dl.
- Subjects having pathological conditions.
- Subjects under medication.

MATERIALS AND METHODS:

The present study entitled effect of yoga therapy on anaemia in menorrhagia subjects was conducted to assess the effect of yoga therapy on anaemia or the level of Haemoglobin and Red blood cell in ladies with heavy menstrual bleeding in P.A College of Engineering, Nadupadav, and Mangalore. 20 ladies of the age 20 – 22 years with the problem of heavy bleeding were selected randomly and divided into two groups of 10 subjects in each group. First group is named experimental group and was exposed to yoga therapy session for 1 hour daily six days per week for 40 days. Second group named control group is allowed to follow their normal lifestyle.

A detailed case history of each subject was taken, which included all the background of the present study with personal details. Yoga therapy for experimental group involved a sequence of asana, pranayama, dhyana, relaxation techniques which were taught gradually and systematically. Red blood cell, Haemoglobin count, weight, B.P was recorded for both the groups before and after yoga therapy. Student t test was employed to analyse the significance of the study statistically.

Parameters of the study:

1. RBC Count: It is a count of actual number of red blood cells per volume of blood. They carry oxygen from lungs to the rest of the body. Abnormal red blood cell levels may be a sign of anaemia.
Women: 3.8 – 5.8 million/cu.mm
2. Haemoglobin count: It measures the amount of oxygen- carrying protein in the blood. The normal value of haemoglobin for women is 11.5 to 16.5g/dl².

Yogic practices:

The following yogic practices taught to experimental group for a period of 40 days. Swastikasana, Vajrasana, Supta Vajrasana, Tadasana 1, Trikonasana, Parsvakonasana, Prasartapadottanasana, Paschimottanasana, Purvottanasana, Pavanamuktasana, Bhujangasana, Baddhakonasana, Upavistakonasana, Uttanapadasana, Ujjayee pranayama, Anuloma Viloma pranayama, Bhastrika pranayama, Bahya kumbhaka and Shavasana.

RESULT:

All the subjects under the study were tested before and after 40 days of yoga therapy. The results show an overall improvement in the RBC count as well as Haemoglobin count considerably in the experimental group. But the control group does not show any significant improvement.

In general the result can be analysed as follows:

- RBC and Haemoglobin count in all the subjects of experimental group was improved.
- Regular practice of yoga helped to reduce the heavy bleeding problem in the subjects of experimental group.

Table 1: The values of RBC and Haemoglobin of experimental group

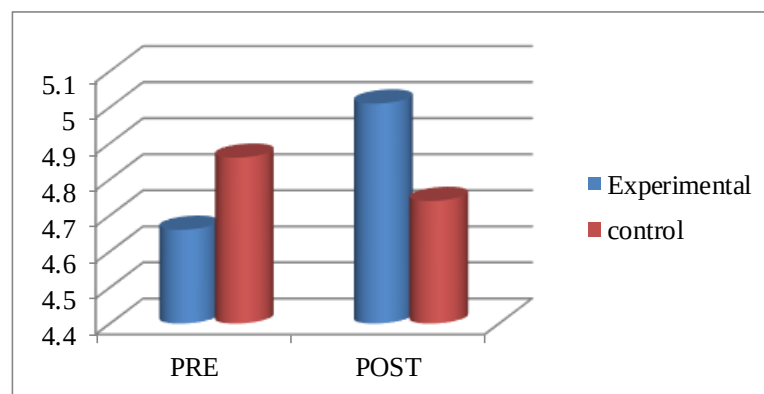
Parameter	Mean		S.D		t value	p value	Significance
	Before	After	Before	After			
RBC	4.66	5.01	0.2366	0.2424	-7.7197	1.47E-05	HS
Haemoglobin	9.85	10.97	1.1088	0.9238	-10.2431	1.46E-05	HS

HS-Highly Significant

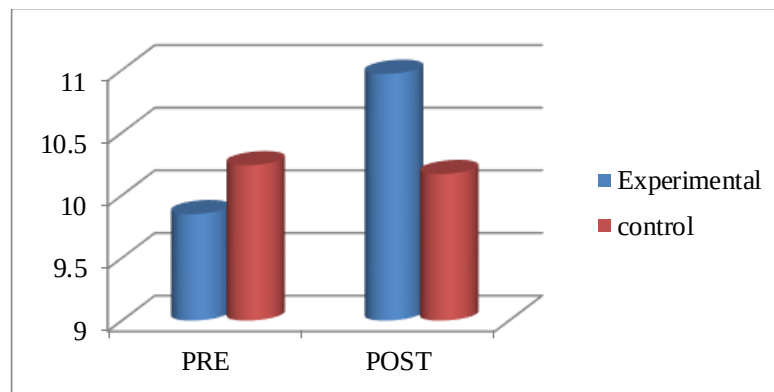
Table 2: The values of RBC and Haemoglobin of Control group

Parameter	Mean		S.D		t value	p value	Significance
	Before	After	Before	After			
RBC	4.86	4.74	0.2366	0.2836	3.0869	0.0129	NS
Haemoglobin	10.24	10.17	0.8695	0.8341	2.68877	0.0248	NS

NS- Non Significant

Graphical representation of result of RBC before and after the yogic practice :

Graphical representation of result of Haemoglobin before and after the yogic practice:



DISCUSSION:

The reason of this study is to find the effect of yoga therapy on reducing the anaemic condition in ladies with Menorrhagia problem. Yoga therapy for 40 days resulted in significant improvement in RBC and Haemoglobin count. In the present study, the results of experimental group were proved to be statistically highly significant for both the parameters. But there is no significant improvement in control group.

From the above result it is clear that all the subjects positively responded to the yoga therapy. But the rate of improvement could be depends upon the regularity of practice. Out of 10 subjects, two subjects were irregular and got less improvement compared to those who were regular for the practice. Therefore yoga therapy is more effective for those who practiced regularly.

In all the 8 subjects there was reduction in menstrual discharge and the symptoms associated with menorrhagia in the upcoming menstruation.

The study showed increased mean value for RBC. Before yoga therapy it was 4.66 and after yoga therapy it increased to 5.01. The p value for RBC was **1.47E-05**. So, it showed statistically improvement with the “t” value of 7.7197. But the control group showed decreased RBC mean from 4.86 to 4.47 and there was no significance with p value 0.0129.

The study showed increased mean value for Haemoglobin also. Before yoga therapy it was 9.85 and after yoga therapy it increased to 10.97. It showed statistically improvement with the value of “t” value of -10.2431 and p value **1.46E – 06**. Control group showed decrease in Haemoglobin from 10.24 to 10.17 and there was no significance with p value 0.0248.

Thus the remarkable improvement in RBC and Haemoglobin count shows the positive effect of yoga.

CONCLUSION:

Classical reference taken from the yogic texts gives clear knowledge about the cause of disease and the solution to overcome this. By adapting this knowledge of yoga one can minimize the impurities in the body and can improve the quality of the body. The present study shows that yoga therapy helps in improving RBC and Haemoglobin levels. It also helps to reduce menorrhagia and its associated symptoms. Yoga therapy is a drugless therapy which can be incorporated in day to day life. This study is a pilot study which may be helpful for the further research using a larger sample size and a long duration of yoga therapy to prove the effect of yoga therapy.

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