

TREATMENT OF INSOMNIA BY TURQUOISE COLOUR (495NM) DURING PREGNANCY

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ABSTRACT

Purpose: The aim of this study was to evaluate the effect of turquoise color (495 nm) for the treatment of insomnia during pregnancy

Material and Methods: This study was carried out in the department of Obstetrics and Gynaecology at Al-Khidmat teaching Mansoorah hospital Lahore affiliated with University College of Medicine and Dentistry, Lahore. 60 pregnant female patients were included in the study and divided into two groups (mean age 27yrs.). The study population belonged to 20-35 years of age. Parity of the patients ranged from para 0 to para 6.

Results: Group 1 acted as control and was not prescribed any medicine or Chromotherapy while group 2 was started with turquoise colour therapy according to the method described earlier. During 1st trimester of pregnancy the mean sleep time was enhanced considerably from 4.5 to 5 hours by applying turquoise light. During 2nd trimester of pregnancy the sleep time was increased from 5 to 5.8 hours. During 3rd trimester of pregnancy, the sleep time was again increased from 4.5 to 5 hours. At the end of the study, Group 1 reported an increase in total sleep time, sleep efficiency, decreased Fatigue and day time drowsiness while increased concentration.

Conclusion: During pregnancy, insomnia is a difficult condition to treat since all the medicines prescribed have side effects on fetus as well as on the mother, so Chromotherapy is suggested as an easy, safe, cost effective and yet an effective method for treating insomnia

INTRODUCTION

Insomnia is one of the most prevalent sleep disorder characterized by sleep difficulty that impairs daily functioning and reduces quality of life¹. During pregnancy, the majority of women experience alterations in sleep²⁻¹⁰. Changes in sleep pattern and sleep duration are commonly reported, as are sleep complaints associated with the physical changes of pregnancy. It is one of the most frequent complaints brought to gynaecologists and primary health care physicians by the pregnant women and research suggests prevalence of insomnia in pregnancy is on the rise¹¹.

Many studies have shown insomnia as one of the most common sleep disorders all over the world. Although some studies indicated its different prevalence in different countries [3http://www.ncbi.nlm.nih.gov/pmc/articles/PMC40054

48/- A15981R2, 4-6], It has been shown that almost 30 percent of people in each society report insomnia in a period of their life, among which 10 percent suffer from chronic insomnia⁶. Moreover the severity of insomnia enhance further in the pregnant female population of the society.

Demographic factors (e.g. aging, taking care of children and rest of family members) are amongst the most commonly hypothesized predisposing factors of insomnia⁷. Insomnia affects many aspects of patient's life, as well. Fatigue, day time drowsiness, reduced memory and concentration, and work disturbance are amongst the adverse effects of insomnia⁴.

Sleep disturbances and changes in sleep pattern begin occurring during the first trimester of pregnancy^{7,9,10} and are likely to be influenced by some of the dramatic changes in reproductive hormone levels that accompany pregnancy. Levels of oestrogens and

progesterone rise throughout pregnancy and peak at term, falling rapidly after delivery¹⁷.

By late in the second trimester (23-24 weeks of gestation), total nocturnal sleep time falls⁶. During the third trimester, the majority of women report altered sleep.⁸⁻¹⁰ Only 1.9% of women fail to experience nocturnal awakenings in the third trimester of pregnancy²⁶. Furthermore, the majority of pregnant women report taking daytime naps^{5,7}, which may add more than an hour to the total 24-hour sleep time^{7,28}. Thus third trimester total sleep time may exceed pre-pregnancy sleep time²⁹. In the last trimester, common etiologies of sleep disturbance include general discomfort (including backache), urinary frequency, and spontaneous awakenings or restless sleep. Fatal movement, heartburn, leg discomfort, fatigue, and difficulty falling asleep or maintaining sleep are also regularly reported.^{4,6,9,18}

The physiologic and biochemical changes of pregnancy may place women at risk for developing specific sleep disorders such as obstructive sleep apnea and restless legs syndrome (RLS)⁸.

MATERIALS AND METHODS

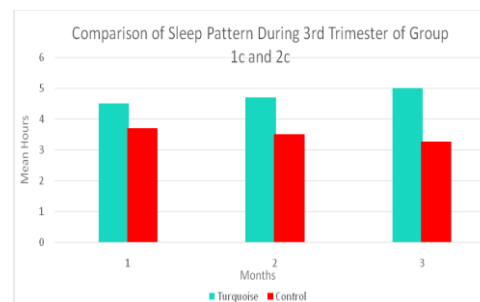
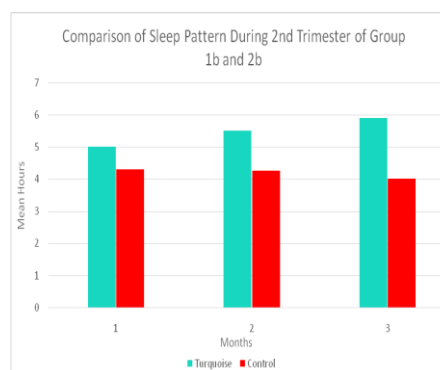
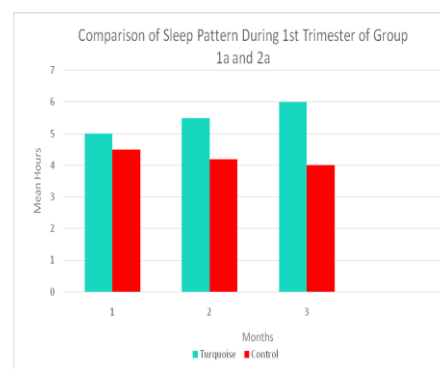
The study was carried out to evaluate the effects of turquoise colour (495) nm for the treatment of insomnia during pregnancy over the period of three months from June 2013 to August 2013 at the department of obstetrics and gynaecology, Al-Khidmat Teaching Mansoorah Hospital, Lahore affiliated with University College of Medicine and Dentistry Lahore. This hospital receives patients from the city as well as from neighbouring rural areas. Most of the patients included in the study were booked and belonged to educated middle class families. 60 pregnant female patients were included in the study and divided into two groups (mean age 27yrs.). The study population belonged to 20-35 years of age. Parity of the patients ranged from para 0 to para 6.

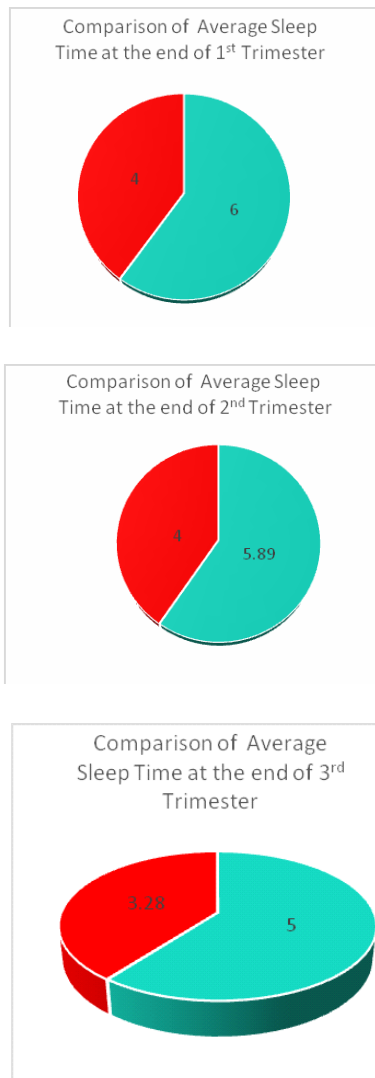
First group (1) served as a control as it was not treated with any medicine. The second group (2) was treated with Chromotherapy with turquoise light (495nm) only. Each group was again divided into 3 sub-groups a: first trimester, b: second trimester, c: third trimester, each sub-group having 10 patients. Turquoise light was applied using light filters of 495nm (Turquoise Colour) from a distance of 30 inches. Patients' head and neck were exposed to this light twice a day for the duration of 20 minutes using table lamp with incandescent light bulb of power 40W. The rise in temperature on the skin was only 1° C which is negligible. Also, at this distance the heat produced was approximately equal to 1 joules/° C. The methodology is

adopted by Color therapy by Khawaja Shamsuddin Azeemi.²⁰

RESULTS

In the start of the therapy, Group 1 acted as control and was not prescribed any medicine or Chromotherapy while group 2a was started with turquoise colour therapy according to the method described earlier. As the graph 1 shows, during 1st trimester of pregnancy the mean sleep time was enhanced considerably from 4.5 to 5 hours by applying turquoise light. As graph 2 shows, during 2nd trimester of pregnancy the sleep time was increased from 5 to 5.8 hours. As graph 3 shows, during 3rd trimester of pregnancy, the sleep time was again increased from 4.5 to 5 hours. At the end of the study, Group 1 reported an increase in total sleep time, sleep efficiency, decreased Fatigue and day time drowsiness while increased concentration.





DISCUSSION

Chromotherapy is a method of treatment that uses the visible spectrum (colours) of electromagnetic radiation to cure diseases. It is a centuries-old concept used successfully over the years to cure various diseases. We also show the possibility of carrying out diverse research into Chromotherapy that is pertinent to deciphering role of colours in pregnant patients suffering from insomnia in the department of obstetrics/Gynaecology, Mansoorah hospital Lahore.

When we speak of colour, we mean energy waves. Every colour, each with its own frequency, is a form of energy²². Ghadiali agreed that beaming a colour or colours onto the skin acts as a form of feeding colour to the body²³. Colour as pure vibrational energy is the rational therapy for maintaining health and overcoming disease²⁴. When applied to the human body, light will provide all deficient energies since every colour is

associated with a quantity of energy. A concept from physics confirms the idea of chromo therapists that 'colours provide energies'. Colours have a profound effect on us at all levels—physical, mental and emotional. According to Birren, if our energy levels are blocked or depleted, then our body cannot function properly, and this in turn can lead to a variety of problems at different levels²⁵. Klotsche confirms this concept as: These interrelating systems of subtle forces recharge or rechannel energy into diseased areas where it is blocked or deficient, for disease is nothing more than a restriction of energy flow²⁶.

Chromotherapy was thus adopted for this study because it has been reported with no side effects by the doctrine of Chromotherapy²⁷. During this study it was also observed that fetal growth and movement, blood pressure were not disturbed by using this treatment.

CONCLUSION

During pregnancy, insomnia is a difficult condition to treat since all the medicines prescribed have side effects on fetus as well as on the mother, so Chromotherapy is suggested as an easy, safe, cost effective and yet an effective method for treating insomnia.

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