COMPARATIVE STUDY BETWEEN NIDRABHRANSHA AND DWIDOSHAJ PRAKRITIS WSR IN-SOMNIA

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ABSTRACT

Nidra is an important phenomenon which occurs regularly in human life as a part of normal physiology Patterns of sleep, specific for the type of prakruti of an individual as described in Ayurveda are not only a benchmark of scientific wisdom of ancient forefathers of Ayurveda. Due to hectic modern style natural pattern of sleep is getting disturbed. So, problems like irritability, depression are getting worst & Diseases like Nidrabhransha are increasing. The modern medical science is still not having a definite treatment for this disease. Although hypnotics, sedative, tranquilizer, Psychotropic are there but they have got their own limitations because of its hazardous adverse effects and their role in curing the disease is very limited rather the patient will be addicted for the particular drug. Therefore, such agents cannot be safe to given for long period. Hence the necessity of the safe drug or lifestyle intervention from Ayurveda is very important to find out better cost effective and safe therapeutic measures.

Keywords: Prakruti, Nidrabhransha, Sleep, Nidra etc.

INTRODUCTION

Nidra is an important phenomenon which occurs regularly in human life as a part of normal physiology, to provide rest and relaxation to the body, mind and senses which get tired and exhausted due to the wear and tear process occurring in due course of daily schedules. Hence, the nidra is considered as one of the essential components of life. In all Samhitas Ahara, Nidra and Brahmacharya are given prime importance under the name of Tryopastambha-the sub pillars of life. The strength, complexion and compactness of the individual body depend on these three factors¹

Aahar, Nidra and Brahmacharya are three important pillars described by Acharya Charka under ‘Tryopastambha’, which plays very important role in maintaining prevention and promotion of health. Due to hectic modern lifestyle natural pattern of sleep is getting disturbed. So, problems like irritability, depression are getting worst & diseases like insomnia are increasing. Hence to stay away from such problems, nidra is most important factor.to defeat this kind of disease various upakramas are mentioned in Ayurved like Dincharya, Nichacharya.²
Acharya charak says that happiness or misery, nourishment or malnourishment, strength or weakness, potency or impotency and sexual urge, life or death, orientation of surrounding, alertness or disorientation and sluggish senses depends on sleep, therefore one should take proper sleep at proper time\[3\]. Ayurveda gives first preference for prevention of disease than cure of disease. Ayurveda has guided a human being to lead healthy & happy life. Acharya Kashyapa, getting good sleep at a proper time is one of the characteristics of a health human being. Acharya-kashyap has also highlighted the importance of nidra as; the timely implemented sleep is an indicator of good health as it brings the normalcy in body tissues and relaxes the person.\[4\]

According to recent advances sleep as a time of rest and recovery from the stress of everyday life, research is revealing that sleep is dynamic activity, during which many processes vital to health and well-being takes place. New evidence shows that sleep is essential to help in maintain mood, memory, and cognitive performance. It also plays a vital role in the normal function of the endocrine and immune systems. In facts, studies show a growing link between sleep duration and a variety of serious health problems, including obesity, diabetes, hypertension and depression.\[5\]

Insomnia is a sleep disorder, people with insomnia have trouble sleeping difficulty falling asleep, or staying asleep as long as desired. Insomnia has a great impact on social, occupational and other functioning areas of the individual. Some of the work regarding sleep disturbance has been carried out in Ayurvedic and modern research fields. Even then, the lacuna remains in the field of concept, diagnostic approaches and management of sleep disorder. The modern medical science is still not having a definite treatment for this disease. Although hypnotics, sedative, tranquilizers, psychotropic are there but they have got their own limitations because of its hazardous adverse effects and their role in curing the disease is very limited rather the patient will be addicted for the particular drug. Such modern anxiolytic drugs have limited application due to hangover effects addiction and producing variety of neuroendocrine, hepatic side effects. Therefore, such agents cannot be safe to given for a long period. Hence the necessity of the safe drug or lifestyle interventions from Ayurveda is very important to find out better cost effective and safe therapeutic measures. Therefore, the present study has been undertaken. About a 1/3rd of the world population is suffering from various sleep disorders during their lifetime, insomnia is chief among them. Now it is increasing in younger age group and middle age group, because of change in lifestyle. Affects the inadequate sleep not only affects the individuals himself but also affects the society in turn increasingly in psychic diseases.\[6\]

**Aim:**-To evaluate the relation between Nidrabhransha and Dwidoshajprakriti w.s.r Insomnia.

**Objectives:**
1) To evaluate different Dwidoshajprakriti of individuals.
2) To study in detail about nidrabhransha with help of standard subjective criteria individuals of different prakriti and evaluate relation between Nidrabhransha and Dwidoshajprakriti.

**Materials and Method:**

**A) Material:**
1. Study Material: - Refer of all modern and Ayurvedic books, article journals related to Nidrabhransha and prakruti.
2. patients: -330 was selected among them 300 patients completed the observation on OPD basis i.e. 100 patients of each Dwidoshajprakruti selected randomly.

**Inclusion Criteria:**
1) Patient of both sex age group above 60 years was selected.
2) Patients having symptoms of Nidrabhransha was selected.

**Exclusion Criteria:**
1) Patients having accidental injury who are bed ridden & hospitalized.
2) Patients of dementia, Alzheimer’s disease and psychosis.

**B) Methods:**
Conceptual study method- all the information regarding nidra, prakruti, nidrabhransha, sleep, somatotypes and insomnia was collected from ayurvedic and modern texts, journals, article and previous work done.

Observational study Methods: -1) Diagnostic phase:- selected all 300 patient from Kayachikitsa OPD and prakrutiparikshan of all individuals done and divided in to 3 groups like

1. vata pittaj group.
2. vata kaphaj group.
3. pitta kaphaj group.

2)Assessment phase:- Ayurvedic parameter, Athens Insomnia scale (AIS), the insomnia severity index, Pittsburgh sleep diary assessment,

Study Design: A randomized controlled clinical study was carried out.

Statistical Analysis: Various parameters are summarized using mean, mode and S.D findings are also supplemented with graphical representation.

To test the hypothesis that, the various indices for insomnia differs according to Prakruti,’ Kruskal-Wallis test’ is used with ‘Mann Whitney U test’ as post hoc test.

Level of significance is kept at 5%
Level Data was collected, tabulated, analyzed and percentage wise results were given.

Total effect of therapy: Total effect of therapy was assessed according to following criteria.

1. Distribution of score of Nidrabhransha (based on Ayurvedic parameters) according to Prakruti.

Table 1: Statistical Analysis of Ayurvedic parameters.

<table>
<thead>
<tr>
<th>subgroup</th>
<th>median score</th>
<th>mean score</th>
<th>S.D of score</th>
<th>d.f</th>
<th>kruskal-wallis statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>vata-pitta group</td>
<td>20</td>
<td>19.45</td>
<td>3.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vata-kapha group</td>
<td>14</td>
<td>14.53</td>
<td>2.8</td>
<td>2</td>
<td>167.36</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>pitta-kapha group</td>
<td>6</td>
<td>8.02</td>
<td>4.72</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Distribution of score of nidrabhransha for vata-pitta group, vatakapha group and pitta-kapha group groups were significantly different (Kruskal-Wallis statistic =167.36, p-value<0.001) at 5%level of significance.
Post-hoc analysis using Dunn test with Bonferroni correction revealed that, score of Nidrabhransha for vata-pitta group was significantly higher than that of vata-kapha group (p-value < 0.001) as well as pitta-kapha group (p-value<0.001).also, the score of Nidrabhransha for vata-kaphaprakruti is significantly higher (p-value<0.001)than that for pitta-kaphaprakruti.

Table 2: Statistical Analysis of Athen’s Insomnia Score[7].

<table>
<thead>
<tr>
<th>subgroups</th>
<th>median score</th>
<th>mean score</th>
<th>S.D of score</th>
<th>d.f</th>
<th>kruskal-wallis statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>vata-pitta groups</td>
<td>21</td>
<td>20.14</td>
<td>3.15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vata-kapha group</td>
<td>16</td>
<td>16.12</td>
<td>2.11</td>
<td>2</td>
<td>185.65</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>pitta</td>
<td>9</td>
<td>10.09</td>
<td>3.89</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Distribution of Athen’s Insomnia score for vata-pitta group, vatakapha group and pitta-kapha groups were significantly different (Kruskal-Wallis statistic =185.65, p-value<0.001) at 5%level of significance.
Post-hoc analysis using Dunn test with Bonferroni correction revealed that Athen’s Insomnia, score for vata-pitta group was significantly higher than that of vata-kapha group (p-value < 0.001) as well as pitta-kapha group (p-value<0.001).also, the Athen’s Insomnia score for vata-kaphaprakruti is significantly higher (p-value<0.001)than that for pitta-kaphaprakruti.
3. Distribution of insomnia severity Index according to prakriti⁸:

**Table 3: Statistical Analysis of Insomnia Severity Index**

<table>
<thead>
<tr>
<th>subgroup</th>
<th>median score</th>
<th>mean score</th>
<th>S.D of score</th>
<th>d.f</th>
<th>kruskal-wallis statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>vata-pitta group</td>
<td>24</td>
<td>23.58</td>
<td>3.52</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vata-kapha group</td>
<td>19</td>
<td>18.9</td>
<td>2.86</td>
<td>2</td>
<td>170.23</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>pitta-kapha group</td>
<td>11</td>
<td>13</td>
<td>4.25</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Distribution of Insomnia severity Index for vata-pitta group, vatakapha group and pitta-kapha groups were significantly different (Kruskal-Wallis statistic =170.23, p-value<0.001) at 5% level of significance. Post-hoc analysis using Dunn test with Bonferroni correction revealed that Insomnia severity Index for vata-pitta group was significantly higher than that of vata-kapha group (p-value < 0.001) as well as pitta–kapha group (p-value<0.001).also, the Insomnia severity Index for vata-kaphapraakruti is significantly higher (p-value<0.001) than that for pitta-kaphapraakruti.

4. Distribution of Pittsburgh sleep diary assessment score according to prakriti⁹:

**Table 4: Statistical Analysis of Pittsburgh Sleep Diary Assessment.**

<table>
<thead>
<tr>
<th>subgroup</th>
<th>median score</th>
<th>mean score</th>
<th>S.D of score</th>
<th>d.f</th>
<th>Kruskal-Wallis statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>vata-pitta group</td>
<td>65</td>
<td>62.73</td>
<td>9.93</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vata-kapha group</td>
<td>47</td>
<td>48.05</td>
<td>8.36</td>
<td>2</td>
<td>160.78</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>pitta-kapha group</td>
<td>25</td>
<td>31.04</td>
<td>13.57</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Distribution of Pittsburgh sleep Diary assessment score for vata-pitta group, vatakapha group and pitta-kapha groups were significantly different (Kruskal-Wallis statistic =160.78, p-value<0.001) at 5% level of significance. Post-hoc analysis using Dunn test with Bonferroni correction revealed that Pittsburgh sleep diary assessment score for vata-pitta group was significantly higher than that of vata-kapha group (p-value < 0.001) as well as pitta–kapha group (p-value<0.001).also, the Pittsburgh sleep diary assessment score for vata-kaphapraakruti is significantly higher (p-value<0.001) than that for pitta-kaphapraakruti.

**Table 5: Statistical Analysis Daytime Consequences Score.**

<table>
<thead>
<tr>
<th>subgroup</th>
<th>median score</th>
<th>mean score</th>
<th>S.D of score</th>
<th>d.f</th>
<th>Kruskal-Wallis Statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>vata-pitta group</td>
<td>13</td>
<td>12.62</td>
<td>2.21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vata-kapha group</td>
<td>9</td>
<td>9.39</td>
<td>1.48</td>
<td>2</td>
<td>181.57</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>pitta-kapha group</td>
<td>6</td>
<td>6.62</td>
<td>2.04</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Distribution of daytime Consequences score of Insomnia for vata-pitta group, vatakapha group and pitta-kapha group groups were significantly different (Kruskal-Wallis statistic =181.57, p-value<0.001) at 5% level of significance. Post-hoc analysis using Dunn test with Bonferroni correction revealed that, Daytime Consequences score of Insomnia for vata-pitta group was significantly higher than that of vata-kapha group (p-value < 0.001) as well as pitta–kapha group (p-value<0.001).also, the daytime consequences score of Insomnia for vata-kaphapraakruti is significantly higher (p-value<0.001) than that for pitta-kaphapraakruti.
Table 6: Statistical Analysis Overall Assessment.

<table>
<thead>
<tr>
<th>subgroup</th>
<th>median score</th>
<th>mean score</th>
<th>S.D of score</th>
<th>d.f</th>
<th>Kruskal-Wallis statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>vata-pitta group</td>
<td>144</td>
<td>138.52</td>
<td>20.87</td>
<td></td>
<td>163.36</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>vata-kapha group</td>
<td>105</td>
<td>106.99</td>
<td>15.45</td>
<td>2</td>
<td>163.36</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>pitta-kapha group</td>
<td>58</td>
<td>68.77</td>
<td>27.57</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Distribution of Overall Assessment score for vata-pitta group, vata-kapha group and pitta-kapha groups were significantly different (Kruskal-Wallis statistic =163.36, p-value<0.001) at 5% level of significance. Post-hoc analysis using Dunn test with Bonferroni correction revealed that, Overall Assessment score for vata-pitta group was significantly higher than that of vata-kapha group (p-value < 0.001) as well as pitta–kapha group (p-value<0.001). Also, the Overall Assessment score for vata-kaphaprakruti is significantly higher (p-value<0.001) than that for pitta-kaphaprakruti.

Graph 6: Distribution of overall assessment score according to prakruti.

Result:- Overall assessment score for vata-pitta group, vata-kapha group and pitta kapha groups was significantly different (Kruskal-Wallis statistic =163.36, p-value <0.001) at 5% level of significance. Overall assessment score for vata–pitta group was significantly higher than that of vata–kapha group (p-value<0.001) as well as pitta-kapha groups (p-value <0.001). Also, the overall assessment score for vata-kaphaprakruti is significantly higher (p-value<0.001) than that for pitta-kaphaprakruti. It means vata and pitta doshas plays an important role in Nidrabhransha.

DISCUSSION

It comprises the Details of the collected data and comparison with those mentioned in the ancient literature & modern texts. Ayurveda literatures opine that vataDosha causes loss of sleep by virtue of its Anti-kapha properties and the kaphaprakruti individual have more sleep-in comparison to other Dosha prakruti. The variation may be because of individual Guna or bhoutikasanghatana of the dosha. Hence an attempt has been made in this study to analysis the same. Vata dominant with vayumahabhuta & rajiguna because of its chalatwa (movement) and rukshadigunas result in interrupted sleep and hence the vata pitta prakruti individual will have less and broken sleep.

Now a days in developing countries like India, man has to complete for good economic status in order to get such desired lifestyle one has to face continuous busy and stressful life. Changing of lifestyle of modern human being has created several disharmonies in his biological system. Due to this overburdened nervous
system of highly civilized human beings, problems in area of sleep have occupied a significant volume of sphere of sufferings above & beneath the surface of consideration. Insomnia is by far the most common sleep disorder that has significant long-term health consequences. one out of every twenty Indians suffers from sleep disorder. 15% to 25% of the population suffering from insomnia in India not far from the 30% that suffers from insomnia in the west. Number of persons aged 50 years and above affected by sleep disorders India are increasing day by day. Factors that make old age persons more vulnerable for sleep problems are senility in modern terms & increased vata dosha according to Ayurveda. it will be more useful and relevant to explore sleep & problems associated with it in old age persons.

The quantitative & qualitative difference in sleep patterns in particular Doshaj constitutions which were observed some thousands of year ago give an indication of astute observation. But at the same time, it obviously demands for its verification by modern methods. The descriptions about preponderance of specific pattern of sleep available in texts of Ayurveda refer to constitutions that are completely composed of single Dosh. In that case, patterns of sleep in constitutions formed out of dual Doshaj which occur most frequently today, need to be investigated.

CONCLUSION
After analyzing all the data and the observation we concluded that Nidrabhransha occurs significantly higher in vatapittajprakruti individuals as compare to vatakaphaj prakriti as well as pitta kaphajprakruti. Nidrabhransha occurs significantly higher in vata kaphaja prakruti as compare to pitta kaphaja prakruti individuals. vata and pitta Dosha plays important role in nidrabhransha. Nidrabhransha observed more in male than female. Maximum incidence was observed in business and houseworkers than other occupation. Nidrabhransha is observed more in middle class persons than other socio-economic individuals. patient having visham & tikshan Agni are largely prone for the development of this disease. nidrabhransha is observed more in krur koshtha person.

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