NUTRACEUTICAL EFFECT OF VIDARYADI GHRITHA IN KARSHYA

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ABSTRACT

Karshya is one of the burning problems in spite of many global wise remedial measures, which have been adopted to provide nutrition. The world health organization estimates that by the year 2015, the prevalence of malnutrition will have decreased to 17.6% globally. In the global campaign of health for all, promotion of proper nutrition is one of the 8 elements of primary health care.¹ In modern nutrition, many supplementary foods are formulated by various experts. In Ayurveda, ample scope is present for incorporating compounds to improve nutritional status. Krusha is one of the Astha nindita Purusha which is explained in the classics of Ayurveda. Karshya is present in pure form or it may be associated symptom with other illness. Vidaryadi Ghritha is easily available which is brimhana and balya. Vidaryadi Ghritha is a unique formulation, which is a Ghritha form of Vidaryadi gana, which is hridya, bhrimhana, and vata-pitta hara properties. By looking above said prevalence of Karshya, this study proposes to evaluate Vidaryadi Ghritha compound in Karshya.

Keywords: Vidaryadi Ghritha, Karshya, under nutrition

INTRODUCTION

Ayurveda is a science of life, which deals with maintenance of health of a healthy person, and to cure the disease from the patient.² The health of the nation depends on the health of its citizens. Humans have to suffer many problems related with health in day-to-day life. To overcome these problems he has to keep his body and mind strong and healthy. Studies in India have shown that nutritional deficiencies are widely persistent among adolescent population is due to which they becomes Krusha & Durbala both physically & mentally. A majority of the population in the developing countries suffer from malnutrition and under nutrition. On global scale, kwashiorkor, marasmus & nutritional anaemia are three principle nutritional deficiency diseases that are being recorded the highest priority action. It forms one of the leading causes of mortality and morbidity in children as well as in adult population.

Global hunger index report ranked India 25th amongst leading countries with hunger situation.³ Increased population induced the poverty and that leads to the under nutrition. India remains home to the largest number of undernourished people in the world.⁴ Karshya is being one of the vata-prakopa janya vyadhi and the management is by bhrimhana chikitsa like laghu san-tarpana, rasayana, vajikarana are indicated.⁵
AIM

Vidaryadi Ghritha acts as an effective nutritional remedy to overcome the problems faced by adults suffering from Karshya. So, the study was planned to evaluate the effect of Vidaryadi Ghritha in improving the nutritional status of Karshya. Karshya is a condition in which person go on losing weight due to rooksha anna paana, langhana, pramitashana etc. He cannot tolerate Sheetha-Ushna, Trushna and Vyadhi utpada pratibandhakatwa is reduced. This is because of rasa, raktha, mamsa Dhathu kshaya, which leads to shareerabala kshaya. So Dosha-Dhathu- Mala impairment seen as a result karshya found to be one of the nidana for many diseases.

Derivation: Krusha word is derived from “krusha tanu karane” dhatu, which means – Alpa, Sookshma, Ksheena (lean or emaciated)

Nirukti:

- Presence of Krusha Bhavaa denotes Karshya.
- That which causes mamsa hinatha or mamsa kshaya.
- Karshya is that which leads to leaness.
- Krusha means – Alpa - decreased body weight.
- Sookshma – Intolerance due to decreased nutrition.
- As per Monier William’s dictionary the word Krusha means lean, emaciated, thin, weak, and feeble.
- The word karshya denotes emaciation or thinness.
- The meaning of krusha according to Ayurvedic Shabda Kosha is – Amedasvi, Durbala, Alpamamsa, Nirmamsa.
- Krushata is the result of shoshita rasasadhatu causing decrease in mamsa of shareera.
- Karshya is Rasapradoshaja Vikara.
- Suppression of Kshudha leads to Vata Prakopa resulting in Karshya.

NIDANA

Karshya in the form of Praakruti Avastha:

There is no doubt that Karshya is a disease but in some physiological condition of the human body, Karshya is seen naturally i.e, there is no pathological abnormalities. Those conditions are as follows.

1. Vata Prakruti: - Krushata is one of the main features in Vata Prakruti person (Sha. Poorva.Kha.6/20). According to Bhavaprakasha – at the time of fertilization, if Shukra Bhaga of father is more & less portion of meda is present, then the offspring born is Krusha. Vata Dosha is predominant in Vata Prakruti person. That is why Shareera Dhatus are in Ksheenavastha level & the person is naturally Krusha Shareera. Here it is not considered as Krusha or Karshya Roga.

2. Krusha Deha: Sushruta has explained Trividha Deha Vibhaga, in that Krusha Deha is one such classification & Brihmana is the line of treatment. In this condition due to presence of Alpa Mamsa Dhatu & Alpa Meda Dhatu; the nourishment becomes very poor. That is why the person becomes Krusha.

3. In Garbhini Avastha: At the time of 5th & 6th month due to the growth & development of the foetus, the Garbhini becomes Krusha. Particularly for this period, the nutrition is very essential for the foetus. Foetus is completely depending on mother. That is why Brihmana Chikitsa is needed in 5th & 6th month. Here also Karshya is one of the symptoms.
4. In Vruddhavastha: - In Vruddhavastha depletion of Rasa-Raktabhi Dhatu are seen as natural phenomena (due to time factor); due to Vata Dosha Pradhanyata in the old age; the body becomes Krusha. Here it is also one of the symptoms only & Yapana is to be done for the same.13

5. Kaala – Adana Kaala: - In Adana Kaala, naturally the body becomes Rus-kha. Due to the increase of Rookshata in the body, the Vata Dosha get aggravated & Rasadi Dhatu becomes Ksheena. So naturally, Krushata is seen. The treatment mentioned for this is to take Vata Shamaka Guru-Snigdaadi Ahara in Dinacharya, Rutchariya & doing Divasvapna is necessary. These are the Prakruti Nivarana Hetu’s told by our Acharyas.

In Grisimrutu, there is clear cut indication for Divasvapna & told that Brihmana Chikitsa is essential for all. Therefore, by the above explanations, we come to conclusion that, Karshya is one of the Lakshana, which is seen in much natural as well as healthy state. For this no treatment is necessary.

**PROBABLE COMPARISON**

In our samhitas there is no direct reference available regarding the symptoms of karshya. So signs and symptoms of atikarshya can be considered as as signs and symptoms of karshya. They may appear in mild form in karshya. As in karshya mamsa kshaya is seen14. So a person having lean and thin body does not have any other complaints is krisha. It can correlate to underweight or under nutrition. There are many nutritional deficiency disorders where weight loss may not occur. Therefore, not all-nutritional deficiency can be correlated to karshya. Nutritional deficiency, where the weight loss is the main event, can be taken as karshya. Under nutrition is widely recognized as major health issue in developing countries of the world15.

**Schematic representation of the Samprapti**

\[\text{Nidana Sevana} \text{\textarrow{}} \text{Viharaja, Aharaja, Manasa} \]

\[\text{Ativyayama, Ativyavaya} \text{\textarrow{}} \text{Rooksha Annapana} \text{\textarrow{}} \text{Chinta,shoka} \]

\[\text{Bhaya Adhyayana, Bharavahan} \text{\textarrow{}} \text{Alpa Bhojana, Langhana} \text{\textarrow{}} \text{Shoka, Dhyan}\]

\[\text{Krodha} \text{\textarrow{}} \text{Kashaya rasa sevana} \]

\[\text{Vata Prakopa} \text{\textarrow{}} \text{Dhatu Kshaya} \text{\textarrow{}} \text{Jatharagnimandya (Vishamagni)} \]

\[\text{Due to Ativyavaya} \text{\textarrow{}} \text{Formation of Alpa Rasa Dhatu} \]

\[\text{Pratiloma Svaroopa Dhatukshaya} \text{\textarrow{}} \text{Rasa Dhatwagni} \text{\textarrow{}} \text{Upashoshana of Alpa Rasa Dhatu by Vayu} \text{\textarrow{}} \text{Alpa Poshana of Sapta Dhatu} \]
### Ingredients of vidaryadi ghritha

<table>
<thead>
<tr>
<th>Drug</th>
<th>Botanical name</th>
<th>Rasa</th>
<th>Guna</th>
<th>Veerya</th>
<th>Vipaka</th>
<th>Karma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vidari</td>
<td>Pueraria tuberose</td>
<td>Madhura</td>
<td>Guru</td>
<td>Sita</td>
<td>Madhura</td>
<td>V-P shamaka</td>
</tr>
<tr>
<td>Eranda</td>
<td>Ricinus communis</td>
<td>Madhura</td>
<td>Snigdha</td>
<td>Ushna</td>
<td>Madura</td>
<td>K-V shamaka</td>
</tr>
<tr>
<td>Vrischikali</td>
<td>Helitropium indicum</td>
<td>Katu</td>
<td>Ushna</td>
<td>Ushna</td>
<td>Katu</td>
<td>Vatakara hrit shudhikrit balya</td>
</tr>
<tr>
<td>Punarnava</td>
<td>Boerhaavia diffusa</td>
<td>Madhura</td>
<td>Laghu rooksha</td>
<td>Ushna</td>
<td>Madhura</td>
<td>Tridoshahara</td>
</tr>
<tr>
<td>Bala</td>
<td>Sida cordifolia</td>
<td>Madhura</td>
<td>Guru snigdha pishchila</td>
<td>sita</td>
<td>Madhura</td>
<td>Vata pitta shamaka</td>
</tr>
<tr>
<td>atibala</td>
<td>Abutilon indicum</td>
<td>Madhura</td>
<td>Guru pishchila</td>
<td>Sita</td>
<td>Madhura</td>
<td>Vata pitta shamaka</td>
</tr>
<tr>
<td>Mudgaparni</td>
<td>Atylosia goensis</td>
<td>Madhura</td>
<td>Laghu ruksha</td>
<td>Sita</td>
<td>Madhura</td>
<td>Vata pitta shamaka</td>
</tr>
<tr>
<td>Mashaparni</td>
<td>Terammus labialis</td>
<td>Madhura</td>
<td>Laghu snigdha</td>
<td>Sita</td>
<td>Madhura</td>
<td>Vata pitta shamaka</td>
</tr>
<tr>
<td>Kandukari</td>
<td>Mucuna puriens</td>
<td>Madhura</td>
<td>Guru snigdha</td>
<td>Ushna</td>
<td>Madhura</td>
<td>Vata shamaka</td>
</tr>
<tr>
<td>Abhiru</td>
<td>Asparagus racemosus</td>
<td>Madhura</td>
<td>Guru snigdha</td>
<td>Sita</td>
<td>Madhura</td>
<td>Vata pitta shamaka</td>
</tr>
<tr>
<td>Jivanthi</td>
<td>Leptadenia reticulate</td>
<td>Madhura</td>
<td>Laghu snigdha</td>
<td>Sita</td>
<td>Madhura</td>
<td>Vata pitta shamaka</td>
</tr>
<tr>
<td>Jivaka</td>
<td>Sub.Pueraria tuberose</td>
<td>Madhura</td>
<td>Guru snigdha</td>
<td>Sita</td>
<td>Madhura</td>
<td>Vata pitta shamaka</td>
</tr>
<tr>
<td>Rishabhaga</td>
<td>Sub.Pueraria tuberose</td>
<td>Madhura</td>
<td>Guru snigdha</td>
<td>Sita</td>
<td>Madhura</td>
<td>Vata pitta shamaka</td>
</tr>
<tr>
<td>Brahathi</td>
<td>Solanum indicum</td>
<td>Katu tiktha</td>
<td>Laghu ruksha</td>
<td>Ushna</td>
<td>Katu</td>
<td>Kapha vata hara</td>
</tr>
<tr>
<td>Kandakari</td>
<td>Solanum xanthocarpum</td>
<td>Katu tiktha</td>
<td>Laghu ruksha</td>
<td>Ushna</td>
<td>Katu</td>
<td>Kapha hara Ag-nikrit</td>
</tr>
<tr>
<td>Gokshura</td>
<td>Tribulus terrestris</td>
<td>Madhura</td>
<td>Guru</td>
<td>Sita</td>
<td>Madhura</td>
<td>Vata pitta</td>
</tr>
</tbody>
</table>
Result

Effect of Vidaryadi Ghritha on Haematological Parameters:

Effect on HB percentage:

Before treatment, the mean score of haemoglobin was 12.27, which increased to 13.47 after 30 days. In Mridweekadi group 8.9% of improvement provided by the therapy and statistically significance at the level of P<0.001, whereas in Vidaryadi ghritha group mean score before treatment was 12.27, which was increased to 12.98 after 30 days. The statistical improvement shown was 5.54% which also was significant at the level of P <0.001.

Table-01: Effect of Vidaryadi Ghritha on Haematological Parameters of 20 Patients of Karshya

<table>
<thead>
<tr>
<th>Hb%</th>
<th>Mean BT</th>
<th>Mean AT</th>
<th>% age of Improvement</th>
<th>S.D. (±)</th>
<th>S.E. (±)</th>
<th>‘t’ Value</th>
<th>‘P’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>VGG</td>
<td>12.27</td>
<td>12.98</td>
<td>5.46</td>
<td>0.50</td>
<td>0.11</td>
<td>-10.53</td>
<td>0.001</td>
</tr>
<tr>
<td>MAG</td>
<td>12.26</td>
<td>13.47</td>
<td>8.9</td>
<td>0.79</td>
<td>0.17</td>
<td>-0.047</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Effect on Serum protein:

Before treatment, the mean score of Serum protein in Vidaryadi Ghritha group was 7.04, which increased to 7.23 after 30 days. The 3.04% of improvement provided by the therapy and are statistically significance at the level of P>0.05.

Table-02: Effect of Vidaryadi Ghritha on Serum protein of 20 Patients of Karshya

<table>
<thead>
<tr>
<th>Serum protein</th>
<th>Mean BT</th>
<th>Mean AT</th>
<th>% age of Improvement</th>
<th>S.D. (±)</th>
<th>S.E. (±)</th>
<th>‘t’ Value</th>
<th>‘P’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>VGG</td>
<td>7.01</td>
<td>7.23</td>
<td>3.04%</td>
<td>0.359</td>
<td>0.080</td>
<td>0.013</td>
<td>&gt;0.05</td>
</tr>
</tbody>
</table>

Effect on Serum albumin:

Before treatment, the mean score of Serum albumin in Vidaryadi Ghritha group was 4.67, which increased to 4.75 after 30 days. The 1.68% of improvement provided by the therapy and are statistically significance at the level of P>0.05.

Table-03: Effect of Vidaryadi Ghritha on Serum albumin of 20 Patients of Karshya

<table>
<thead>
<tr>
<th>Serum</th>
<th>Mean</th>
<th>Mean</th>
<th>% age of Improvement</th>
<th>S.D.</th>
<th>S.E.</th>
<th>‘t’</th>
<th>‘P’ value</th>
</tr>
</thead>
</table>

Comparative effect of vidaryadi ghritha with Mridweekadi Avaleha

The Table shows that there was no significant difference found in improving the various parameters of Karshya, between Vidaryadi Ghritha and Mridweekadi Avaleha group at a significance level of (p <0.5).

Table no. 04
Showing the statistical values of unpaired t-test

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>M.DIFF</th>
<th>SE</th>
<th>t-value</th>
<th>p value</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEIGHT</td>
<td>-0.61850</td>
<td>0.3609</td>
<td>-1.713</td>
<td>&gt;0.05</td>
<td>NS</td>
</tr>
<tr>
<td>BMI</td>
<td>-0.26300</td>
<td>0.14658</td>
<td>-1.794</td>
<td>&gt;0.05</td>
<td>NS</td>
</tr>
<tr>
<td>NC</td>
<td>-0.45000</td>
<td>0.17302</td>
<td>-2.601</td>
<td>&lt;0.05</td>
<td>NS</td>
</tr>
<tr>
<td>MUAC RT</td>
<td>0.57500</td>
<td>0.44259</td>
<td>1.299</td>
<td>&gt;0.05</td>
<td>NS</td>
</tr>
<tr>
<td>MUAC LT</td>
<td>0.000</td>
<td>0.20049</td>
<td>0.000</td>
<td>&gt;0.05</td>
<td>NS</td>
</tr>
<tr>
<td>MTC RT</td>
<td>-0.27500</td>
<td>0.78930</td>
<td>-0.348</td>
<td>&gt;0.05</td>
<td>NS</td>
</tr>
<tr>
<td>MTC LT</td>
<td>0.65000</td>
<td>0.57325</td>
<td>1.134</td>
<td>&gt;0.05</td>
<td>NS</td>
</tr>
<tr>
<td>AC</td>
<td>0.12500</td>
<td>0.48078</td>
<td>0.260</td>
<td>&gt;0.05</td>
<td>NS</td>
</tr>
<tr>
<td>WHR</td>
<td>-0.00800</td>
<td>0.00584</td>
<td>-1.370</td>
<td>&gt;0.05</td>
<td>NS</td>
</tr>
</tbody>
</table>

DISCUSSION

A clinical study on the patients presenting with features of Karshya was carried out. 20 subjects who were fulfilling the selection criteria were selected. The results obtained are compared with Mridweekadi Avaleha (standard control group). 1 BD of Chitrakadi Vati was administered for 2 days or till attainment of Nirama lakshana, Agnideepiti and Sroto vishodhana. This might help in better digestion and absorption of the administered medicines. It is Katu, Tikta Rasa, Laghu Ruksha, Teekshna Guna and Ushna Virya and improves Agni and act as Vatanulomaka. Prevalence is more in developing country like India, which alarms the medical faculty for better option like Vidaryadi Ghritha as it is Hridya, Brimhana and vata-pitta hara properties and having proven antioxidant properties. Since it is a Ghritha form, which is considered as best among all sneha drayyas gives snehana to tissues, thus nourishes the body. Ghrita contains fat that functions as a structural element of the cell and it is major source of energy. Ghrita contain medium chain triglycerides, which are immediate source of energy. Medium chain triglycerides improves the metabolic rate, spare the muscle glycogen and improves physical endurance.\(^1\) It poses Brimhaniya, Balya, Rasayana, Jivaniya, Vatahara Karma and hence commonly used in Daurbalya, Kshaya, Shosh.\(^2\) Ghrita is considered as ajanma-satmya, so everyone used to take ghritha and palatability is also good as it is in liquid form medicine.

Vidaryadi Ghritha having a property of Madhura Rasa and Madhura-Vipaka, which has Vata Shamaka effect. The Sroto shodhaka property of formulation helps in the clearance of channels and improves the circulation of Dhatus and this indirectly helps in nourishment of Dhatus. Which means it is responsible for Uttarottara Dhatu Poshana. Vatanulomaka and Pitta shamaka property of formulation helps in balance and maintenance of Agni and ultimately causes Samyak Aharpaka. Vrishya property helps in triglyceride synthesis, which is Deha vridhikara Bhava. On the
The digestibility coefficient or rate of absorption is 96%, which is highest of all oils and fat. It contains 8% less lower saturated fatty acids, which makes it easily digestible. Thus net protein utilization enhanced which leads to proper metabolism and absorption of protein and nutrients. Ghee also contains beta-carotene and Vitamin E, which are antioxidants themselves. Ghee helps to provide extra calories needed to gain weight since which contributes a considerable percentage of total energy intakes. Essential fatty acids found in ghee are very beneficial for cell development. Isoflavone present in Vidari is a free radical scavenger and polyphenol modulate hepatic cholesterol metabolism and reduce inflammation in GIT.104 Probable mode of action can well explained in the ground of Guna pancha-ka. It is found that majority of ingredients have predominance of guru, snigdha, madhura rasa, madhura vipaka and sheetha veerya. Absorption and delivery to the target is crucial in obtaining the maximum benefit from any formulation. This is facilitated by Vidaryadi Ghritha through lipophilic nature. It helps and accelerates the bioavailability of the nutrients.

All this establishes that Vidaryadi Ghritha has an effective role in the greater utilization of protein and other nutrients thus improve the nutritional status.

CONCLUSION

- Efficacy Vidaryadi Ghritha is proven based on the clinical study in Karshya. The results were statistically significant and all the patients responded to the treatment.
- Based on the results obtained from this study, majority of the parameters showed significant results in both the groups. However, there was no much difference in the results between the groups. As a result, both Vidaryadi Ghritha and Mridweekadi Avaleha can be adopted as treatment modalities for the management of Karshya. Hence, null hypothesis was rejected.
- Between both groups, Mridweekadi Avaleha (standard control group) displayed better effect when compared with Vidaryadi Ghritha (study group). Vidaryadi Ghritha showed better efficacy in improving sleep compared with Mridweekadi avaleha.
- Vidaryadi Ghritha can be compared with nutraceutical but not with functional food or dietary supplement.
- It can be concluded that Vidaryadi Ghritha can be used effectively for weight gain in Karshya as there is more improvement as compared with diet programme alone.

As Vata Dosha is predominant in Karshya, usage of ghritha is more efficient as main ingredients are all Madhura in Vipaka having snigdha guna and yogavahi properties.

REFERENCE


8. Concept of Brimhana w.s.r to Karshya, Namjoshi M 1994, B.P.Dept.


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Source of Support: Nil
Conflict of Interest: None Declared