A Clinical Study to Evaluate the Efficacy of \textit{Baladi Yapana Basti} in \textit{Pakshaghata}

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ABSTRACT

\textit{Basti} chikitsa is considered to be the \textit{pradhanathama} chikitsa$^1$ as it does the \textit{brihmana} of the \textit{shareera} from \textit{keshagra} to \textit{nakhagra}$^2$ thereby alleviating the diseases produced by \textit{vatadosha} in any part of the body$^3$. \textit{Basti} is the best line of treatment for a \textit{durbhala} and \textit{avirechya} patient suffering from \textit{vatavyadhi}$^4$. \textit{Yapanabasti}’s are suitable for administration in all the \textit{ritus} and both in \textit{swastha} and \textit{aatura purushas} wherein it pacifies all types of diseases and bestows strength$^5$. \textit{Baladi yapana basti} explained by Acharya Charaka is used in the treatment of \textit{pakshaghata} by virtue of its \textit{sadhyobalajanana} and \textit{rasayana} qualities$^6$. Stroke or CVA is defined as the rapid onset of focal neurological deficit, resulting from diseases of the cerebral vasculature and its contents. It represents third most common cause of death. Survey studies show approximately 60% strokes are due to ischemic, 20% of cerebral infarction and another 20% of are brain haemorrhage. Further, community surveys in India revealed that the prevalence rate of stroke is in range of 200/100,000 persons, and this accounts for nearly 1.5\% of urban hospital admissions$^7$. CVA may be compared to \textit{pakshaghata}$^8$ wherein in greatly aggravated \textit{vata}, invades the \textit{shareera dhamani}’s causing \textit{sandhibandha moksha} and paralysing one side of the body causing \textit{cheshtahani} of the side with pain and loss of speech. In this condition the \textit{yapana basti} which is \textit{sadhyobalajanana} and \textit{rasayana} is beneficial. By keeping all these points \textit{baladi yapana basti} has been selected for the present study which was an open clinical study with pre-test and post-test design wherein 25 patients diagnosed as \textit{Pakshaghata} of either sex were selected. The results obtained substantiates the action of \textit{Baladi Yapana Basti} as \textit{sadyobalajanana}, \textit{vatahara}, and \textit{rasayana}.

KEYWORDS

\textit{Baladi Yapana Basti}, Pakshaghata, CVA

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INTRODUCTION

In Ayurveda, disease is treated by two methods - Sodhana (purification of dosha by specific procedures) and Shamana (palliative) treatment. Sodhana eliminates excessively vitiated doshas out of the body and maintains homeostasis among doshas. Shodhana therapy not only cures the disease but also eliminates the causative factors whereas shamana does palliation of vitiated doshas providing symptomatic relief. Shodhana of body is done by Panchakarma therapy. Basti is the most important constituent of the Panchakarma due to its multiple effects. Basti eradicates morbid vata from the root along with other doshas. Since the Basti has the capacity to eradicate most of diseases occurring in Sakha, Kostha & Marma Sthanas, it is referred to as ‘Ardha Chikitsa’ or ‘Sampoorna Chikitsa’ by various Acharyas.

The word “Vatavyadhi” has been composed from the two words Vata andVyadhi. Vata is considered to be the most powerful and active amongst the three Doshas. It gives support to the body & controls all the activities of body. It motivates & controls all other Doshas, Dhatus & Malas. Vata has predominant influence on the three principle routes of diseases namely as Sakha, Kostha &Marma-Asthि-Sandhi. Although the entire body is the dwelling of three Doshas – Vata, Pitta and Kapha, but the prime importance has been given to Vata due to its capacity to move in the entire body without help of other two Doshas. Vayu is the main factor, which is responsible for the healthy and diseased status of the individual. Due to the higher efficacy, Vata can produce eighty types of defects and derangements in the body (nanatmajavikaras). The word “Vyadhi” i.e. Disorder is suggestive of circumstances in which body and mind both are in distress. In this way the collective meaning of Vatavyadhi indicates the specific disorders occurring due to the Vatadosha.

Pakshaghata is a most distressing disease among vata nanatmaja vyadhis. The pathological phenomena of vata playing central role in the manifestation of Pakshaghata are Suddha vata prakopa, anyadosha Samsirsta vata prakopa and dhatu kshayajanya vata prakopa. Akin to Pakshaghata, Hemiplegia is also caused by a wide spectrum of disease processes like vascular disorders, infective disorders of brain tissue, tumors, trauma etc. Among these, vascular accident or stroke is the commonest cause of hemiplegia classified as either hemorrhagic or ischemic, strokes typically manifest with the sudden onset of focal neurologic deficits such as weakness,
sensory deficit or difficulties with language. Whereas diagnostic part of Pakshaghata (hemiplegia) is strong in modern science, no complete cure is available till today. Hence substantial reasoning for complete treatment of hemiplegia by Ayurveda has to be established.

In the context of vatavyadhi, Acharyas have explained Basti as the best line of treatment in a durbala and avirechya patient suffering from Vatavyadhi⁴. Therefore, the present study has been selected to see the vatahara, sadhyo bala janana and rasayana effect of Baladi Yapana Basti in patients suffering with Pakshaghata.

**OBJECTIVE OF THE STUDY**

- To evaluate the efficacy of Baladi Yapana Basti in Pakshaghata

**MATERIALS AND METHODS**

- **Source of Data**
  
  Patients diagnosed as Pakshaghata were taken for the study from the IPD of S.DM.Ayurveda hospital, Udupi.

- **Method of Collection of Data**
  
  It is a clinical study to evaluate the efficacy of Baladi Yapana Basti in Pakshaghata disease, wherein patients of either gender were selected. A detailed proforma was prepared considering all points pertaining to history, signs, symptoms and examinations as mentioned in our classics and allied sciences to confirm the diagnosis.

- **Inclusion Criteria**
  
  - Patients fulfilling the criteria of diagnosis of Pakshaghata.
  - Patients who are fit for Nirooha Basti

- **Exclusion Criteria**
  
  - Patients suffering from Pakshaghata produced as a result of injury, infectious diseases and malignancies.
  - Patients who are unfit for Nirooha Basti.

- **Investigations**
  
  - No specific laboratory investigations are needed for diagnosis.
  - Routine blood investigations.
  - CT – scan, MRI [ if needed for differential diagnosis ]

- **Study Design**
  
  This is an open clinical study with pre-test and post-test design wherein 25 patients diagnosed as Pakshaghata of either sex were selected. All patients fulfilling the inclusion criteria were subjected to Baladi Yapana Basti.

- **Duration of Study**
  
  - Duration of treatment: 08 days
  - Duration of follow up: 16 days
  - Total duration of study: 24 days

- **INTERVENTION**

  - **Poorva karma**
    
    1) Preparation of the medicine
• Ingredients of Baladi Yapana Basti\textsuperscript{12} (ref: charakasamhita siddhi sthana 12/16(5))
  **Madhu** – 80ml
  **Sauvarchala lavana** – 5gms
  **Gritha** – 120ml
  **Kalka dravyas** – 40gms
    (madhuka,madanaphala)
  **Kashaya** (boiled in milk) – 240ml
    (bala, atibala, vidhari, shaliparni , prishniparni , brihati , kantakari ,
    darbhamoola , parushaka , kashmarya ,
    bilwaphala , yava )
  2)Preparation for abhyanga and swedana
    Sthanika abhyanga : with ksheerabalataila
    Sthanika swedana:nadee sweda with balamoolla qwatha

**Pradhana karma**

In a **Yoga Basti** course (M N M N M N M)
  Baladi Yapana Basti will be given in a dose of 480 ml on 2\textsuperscript{nd} 4\textsuperscript{th} 6\textsuperscript{th} morning (3 Nirooha Basti in total) in empty stomach. Along with this 5 **Matra Basti** with **Dhanwanthara taila** in a dose of 30ml on 1\textsuperscript{st}, 3rd, 5\textsuperscript{th}, 7\textsuperscript{th}, 8\textsuperscript{th} day is given in the afternoon immediately after food.

**Paschat karma**

✓ Avoidance of Astamaha doshakara bhavas.
✓ Ushna, laghu, anabhishyandhibhojana.
✓ Pariharakala for 16 days.

**ASSESSMENT CRITERIA**

Samyak lakshanas were assessed daily after the administration of Baladi Yapana Basti. The results were assessed on the basis of signs and symptoms of Pakshaghata before and after treatment i.e, on 8\textsuperscript{th} and 24\textsuperscript{th} day after administration of Basti.

**Subjective Parameters**

• Symptoms of Pakshaghata \textsuperscript{13}
• Symptoms of samyak niruda \textsuperscript{14}

**Objective Parameters**

• Neurological mapping \textsuperscript{15}

**OBSERVATIONS**

• No. of patients registered for the study – 25
• No. of patients completed the study – 25
• No. of dropout – 0

**DISCUSSION**

Pakshaghata is a Kastasadhya vyadhi because all the Vatavyadhis are difficult to cure and they are said as Mahagada. Madhyama Rogamarga, situation in marma,sira,snayu,kandara, dhatukshaya and vriddhavastha also makes it Kastasadhya.

The main symptoms of Pakshaghata are cheshta nivrithi in the dakshina/vamapaksha, vakstambha, ruja, achethana, sandhi bandha vimoksha, hasta pada sankocha etc. which are mainly caused due to the vata dosha\textsuperscript{13}. According
to Sushruta one can treat Vataja, Pittaja, Kaphaja, and Raktaja disorders either alone or when they produces diseases in combination with the help of Basti\textsuperscript{16}. Further Sushruta mentioned multidimensional therapeutic effect of Basti, which can be achieved by using different drugs in combinations\textsuperscript{17}. Here Baladi Yapana Basti was selected as it has Vatahara, Sadhyobalajanana and Rasayana properties\textsuperscript{18}. In this study, maximum number (36\%) of the patients belong to the age group of 61-70yrs, followed by 32\% belonging to the age group of 51-60yrs. This indicates that, Pakshaghata is dominant in older age group. From the point of Ayurveda, Parihani Avastha of vayah mentioned by Acharya Sushruta (40-70 years) is the stage which is dominated by Degeneration & also this is the phase of Vatakaala. In this study, maximum number of the patients (72\%) were males in comparison with the females (28\%). This supports the theory which states that males are more prone to stroke than females. Majority of the patients (48\%) were labourers, followed by (28\%) housewives and (8\%) agriculturists who have more physical strain which corresponds to the etiology of Pakshaghata(Table 1,2).

### Table 1 Objective parameters

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Group With Maximum %</th>
<th>Group With Minimum %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>61-70 Yrs(36%)</td>
<td>81-90 Yrs(04%)</td>
</tr>
<tr>
<td>Sex</td>
<td>Male (72%)</td>
<td>Female (28%)</td>
</tr>
<tr>
<td>Religion</td>
<td>Hindu (92%)</td>
<td>Christian &amp; Muslim (04% Each)</td>
</tr>
<tr>
<td>Educational Status</td>
<td>Primary &amp; Middle (32% Each)</td>
<td>Graduation (04%)</td>
</tr>
<tr>
<td>Marital Status</td>
<td>Married(72%)</td>
<td>Unmarried(08%)</td>
</tr>
<tr>
<td>Socio Economic Status</td>
<td>Middle Class(44%)</td>
<td>Upper Middle Class(24%)</td>
</tr>
<tr>
<td>Occupation</td>
<td>Labour (48%)</td>
<td>Service(04%)</td>
</tr>
<tr>
<td>Desha</td>
<td>Anoopa(76%)</td>
<td>Sadharana(08%)</td>
</tr>
<tr>
<td>Diet</td>
<td>Mixed (92%)</td>
<td>Vegetarian(08%)</td>
</tr>
<tr>
<td>Addictions</td>
<td>No Addiction (48%)</td>
<td>Alcohol, Smoking &amp; Tobacco (04% Each)</td>
</tr>
<tr>
<td>Associated Diseases</td>
<td>Nothing Specific (36%)</td>
<td>Dm (08%)</td>
</tr>
</tbody>
</table>

### Table 2 Highlights of Dashavidha Pareeksha

<table>
<thead>
<tr>
<th>Prakruti</th>
<th>Vata-Pitta(44%)</th>
<th>Vata-Kapha(24%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vayah</td>
<td>Vridha(52%)</td>
<td>Baala(00%)</td>
</tr>
<tr>
<td>Satva</td>
<td>Madhyama(60%)</td>
<td>Pravara(04%)</td>
</tr>
<tr>
<td>Samhanana</td>
<td>Madhyama(76%)</td>
<td>Pravara(04%)</td>
</tr>
<tr>
<td>Sathmya</td>
<td>Pravara(88%)</td>
<td>Madhyama(12%)</td>
</tr>
<tr>
<td>Saara</td>
<td>Madhyama(56%)</td>
<td>Pravara(00%)</td>
</tr>
<tr>
<td>Aharashakti-Purvakaleena</td>
<td>Pravara(68%)</td>
<td>Avara(08%)</td>
</tr>
<tr>
<td>Aharashakti-Adhyatana</td>
<td>Pravara(44%)</td>
<td>Madhyama &amp; Avara(28% Each)</td>
</tr>
<tr>
<td>Vyayama Shakti-Purvakaleena</td>
<td>Pravara(64%)</td>
<td>Avara(04%)</td>
</tr>
<tr>
<td>Vyayamashakti-Adhyatana</td>
<td>Avara(96%)</td>
<td>Pravara(00%)</td>
</tr>
</tbody>
</table>
The statistical analysis of Power with respect to movement of Upper Limb - Shoulder, Elbow, Wrist, Lower Limb - Hip, Knee and Ankle, Sitting from lying down posture & Standing from sitting posture before treatment, after treatment and after follow up in the group, revealed significant changes. Mean score of above said parameters was increased before treatment, after treatment and after follow up. i.e. statistically extremely significant (Table 3).

The statistical analysis of Finger movement & Toe movement, Loss of speech, Hand grip power before treatment, after treatment and follow up in the group, revealed apparent changes. Mean score of above said parameters was increased before treatment, after treatment and after follow up. i.e. statistically significant (Table 4).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mean value</th>
<th>Percentage</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>BT</td>
<td>AT</td>
</tr>
<tr>
<td>Power-UL-Shoulder</td>
<td>1.20</td>
<td>2.00</td>
<td>2.80</td>
</tr>
<tr>
<td>Power-UL-Elbow</td>
<td>1.56</td>
<td>2.84</td>
<td>3.04</td>
</tr>
<tr>
<td>Power-UL-Wrist</td>
<td>1.32</td>
<td>2.36</td>
<td>3.00</td>
</tr>
<tr>
<td>power-LL-Hip</td>
<td>1.52</td>
<td>2.72</td>
<td>3.08</td>
</tr>
<tr>
<td>power-LL-Knee</td>
<td>1.48</td>
<td>2.68</td>
<td>3.04</td>
</tr>
<tr>
<td>power-LL-Ankle</td>
<td>1.28</td>
<td>2.04</td>
<td>2.96</td>
</tr>
<tr>
<td>Sitting From Lying Down</td>
<td>0.84</td>
<td>1.60</td>
<td>1.72</td>
</tr>
</tbody>
</table>

Significant results after the treatment & after the follow up was observed in the following parameters:

The statistical analysis of Reflexes revealed no apparent changes. Mean score of above said parameters remained almost same before treatment, after treatment and after follow up. i.e. statistically not significant.

The benefits seen immediately after Baladi Yapana Basti was maintained (increased) even after the completion of follow up period. This may be the reason that Acharyas gave much importance to Dwiguna parihara kala. Also it shows that the benefit of Basti is long standing one.

**Number of evacuations**

Number of evacuations varied from patient to patient. In Niruha Basti maximum number of evacuations observed was 5
times & minimum of 01 time. In *Matra Basti* maximum number of evacuations was observed was 4 times & minimum number of evacuation is one.

**Retention Time**

Maximum duration of retention of *Niruha Basti* was for 45 minutes and minimum duration was for 1 minute. Maximum time of retention of *Matra Basti* was for 16 hours and minimum time was for 15 minutes.

**CONCLUSION**

Power with respect to gross movement of Upper Limb & Lower Limb showed statistically extremely significant results. Altered speech, finger movement of hand and toe showed statistically significant results. The results obtained substantiates the action of *Baladi Yapana Basti* as *sadyobalajanana, vatahara*, and *rasayana*. 
REFERENCES