

Effect of *Bhadradarvadi Taila* and *Sahacaradi Taila* in *Khanja* and *Pangu*

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Walking disability due to the drawing up (contractions) of the kandaras (muscle tendons) of one leg by deranged vayu situated at kati region is called as Khanja, when both legs are similarly affected, the disease is called Pangu. Since the disease originates at kati Katyasritavata—Apanavaya is involved. The main complaints-disturbed visceral reflex (micturition and defecation) loss of sensation, inability to walk are due to Apana vaigunya. Dhathukshaya and margavarana due to an aghata on kukundare marma or a lesion due to any reason to spinal cord are the two basic factors for this disease. The

institute has taken up intensive research trials to evolve an effective therapy against this disease. A research trial was conducted to assess the efficacy of Bhadradarvadi taila and Sahacaradi taila on Khanja and Pangu. Forty patients were selected and divided into two groups at random. Bhadradarvadi taila (Group I) and Sahacaradi taila (Group II) were administered 20 ml. at 7 a.m. and 5 p.m. orally, matrabasti with 60 ml. and abhyanga with 50 ml. On assessment after 30 days treatment, a course of snehapana and yogabasti was prescribed in those cases where improvement was less than 30%. The results of the study was analysed at the end of the trial i.e. after 90 days. The result in both groups were found statistically significant. Routine blood, stool, urine and radiological investigations did not show any significant changes as a result of treatment. Sahacaradi taila was found more effective in the disease of vital origin and degenerative

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cases. But both preparations showed good response in intervertebral disc prolapse cases.

Introduction

Walking disability due to contractions of the *Kandaras* (muscle tendons) of one leg by deranged *vayu* situated at *kati* region is called *Khanja*. When both legs are similarly affected, the disease is called *Pangu* (Vagbhata, 1957). The aetiology, pathogenesis and treatment are the same for both these diseases, they are considered as a single entity. Since the disease originates at *kati* due to vitiated *vata*, probably *katyasarita vata* with means *apanavayu* is involved. The main complaints—disturbed visceral reflex (micturition and defecation) loss of sensation, inability to walk, etc. are due to *apanavaigunya* (Susruta, 1966). *Dhatukshaya* (degeneration) and *margavarana* (obstruction) are the two basic factors for *vataprakopa* (Vagbhata, 1957). But the actual manifestation including extent of the body affected depends upon the location of *doshadooshyasamoorchana* (Vagbhata 1957). As the disease originates at *kati*, the *doshadooshyasa Moorchana* should have occurred at spinal cord and a lesion of the spinal cord due to any cause affects its normal functions, especially any *aghata* on *janu* and *kukunduramarmas* leads to paralysis of lower limbs (Vagbhata, 1957).

According to the modern concept, paraplegia is caused by spinal cord lesions, cerebral lesions (damage to leg

areas in the cortex) or hysteria. Here we are considering lesions pertaining to spinal cord only. This is broadly classified into congenital, traumatic, inflammatory and neoplastic according to the aetiology.

Margavarana may occur due to compression, tumour, viral or bacterial infection or vascular lesion of spinal cord. The *dhatukshayaja Pangu* can be equated to degenerative and congenital type of paraplegia.

The Institute has taken up intensive research studies with a view to evolve an effective therapy for this disease. The studies so far conducted revealed that the Ayurvedic line of treatment gives good relief to *Khanja* and *Pangu* patients. Internal and external application of medicated oils help in restoration of muscle strength and power. A research trial conducted with *Sahacaradi* (*Sahacara* 3 parts, *Devadaru* 2 parts and *Shanti* 1 part) taila showed that it has good effect in *Khanja* and *Pangu* patients (Nair, 1984). This prompted us to initiate studies to compare the efficacy of *Sahacaradi* preparation *vis a vis* other well known preparations. Results of the comparative study with *Nirgundi* has already been communicated (Nair, 1984). In this study efficacy of *Sahacara* oil has been compared with that of *Bhadradarvadi*. Internal and external application of these oils also gave good response. *Bhadradarvadi gana* (Vagbhata, 1957) is considered

to be an effective medicine for *vata* diseases in general. *Hrasuapanchamoola* and *Brahatpanchamoola* are well known for *Vatanulomana* and hence were expected to give good response in urinary and excretory systems. *Bala* and *Atibala* are considered good for *brumhana* and *Devadaru*, *Tagara* and *Kustha* for *vatahara* properties.

Material and Methods

Forty patients of either sex were selected from the Out-patient Department of the Institute for the trial. Patients were between the age group of 15 to 70 years and grouped into two at random as Group I and II. *Bhadradarvadi taila* and *Sahacaradi taila* (Caraka, 1970) were selected for the study. *Tila taila* (Sesamum oil) was medicated with respective *yogas* for preparing *Bhadradarvadi taila* and *Suhacaradi taila*. Following investigations were done before and after completion of the trial.

1. Blood for total leucocyte, differential count, haemoglobin, E.S.R., blood sugar, serum cholesterol and serum protein.
2. Stool for ova, cysts and amoebas.
3. Urine for albumin, sugar and microscopy.
4. X-ray of lumbosacral and thoracic regions.

Clinical symptoms were taken as main

criteria for selection. Signs and symptoms were graded and marks allotted (numerical values as per criteria of assessment). An assessment chart was prepared showing the marks allotted for each criterion as given below.

Control over urinary bladder—5, Control over rectum—5, Sensory changes—16, Muscle power—22, Muscle wasting—9, Fasciculations (Muscle twitching)—3, Electric chorea—3, Pain—3, Clonus—Ankle—2, Petella—2, Muscle tone—4, Deep tendon reflexes—Knee—4, Ankle—4, Plantar reflexes—6, Abdominal reflexes—2, Pressing power—6 and walking speed—4. Assessment was done initially, periodically and at the end of the trial and recorded. Trial period was fixed as 90 days and was divided into 3 stages of 30 days each. *Bhadradarvadi taila* and *Sahacaradi taila* were administered in Group I and II respectively. Taila was administered orally in small doses of 20 ml. at 7 a.m. and 5 p.m. as *samana sneha* in both the groups for 30 days in the first stage. *Abhyanga* was given with respective oils in both the groups for 30 minutes. Complete assessment was made on completion of the first stage. The cases in which more than 30% of improvement was noted, the same line of treatment was continued till the end of the trial—i.e., for 90 days. The cases in which improvement was less than 30% were changed over to the second stage of the trial. A course of *snehapana* with respective oil

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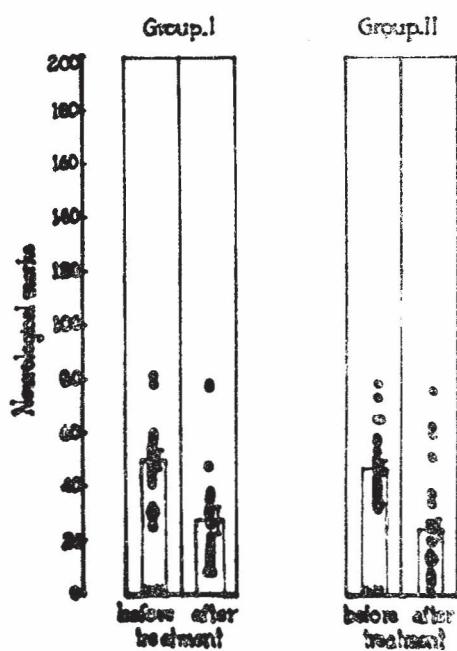


Fig 1

was given in the second stage. If the improvement was more than 15% on completion of *snehabana*, *sveda* and *vireca*, a second course of *snehabana* was administered. Remaining cases were transferred to the third stage of the trial. A course of *yoga basti* (Vagbhata, 1957) (5 *anuvasanas* and 3 *niroahas*) was given

in the third stage. On assessment after a course of *basti*, if the improvement was more than 10%, a second course of *basti* treatment was given, while others were discontinued from the trial. Usual hospital diet was prescribed to all patients as per the Table—I.

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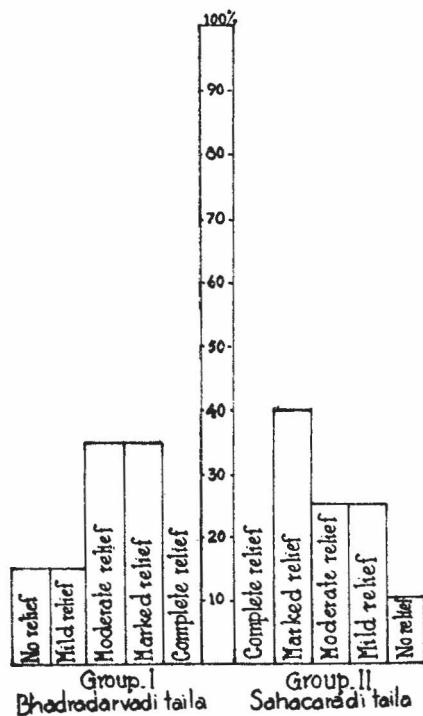


Fig. 2

Clinical improvement was graded as (1) complete relief (disappearance of all signs and symptoms), (2) marked relief (61-99% relief), (3) moderate relief (31-60% relief), (4) mild relief (10-30% relief) and (5) No relief (upto 10% relief).

Result

Marked relief and moderate relief were noted in 7 cases in each and mild

relief in 3 cases in group I (*Bhadradarvadi*), marked relief in eight cases, moderate relief and mild relief in five cases each was reported in group II (*Sahacaradi*). Three cases in Group I and two cases in group II did not respond to the treatment. On statistical analysis, the results in both the groups were significant (Table-II). On assessment of the improvement after 30 days of treatment

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**Table—I
Diet**

Morning	Moon	Evening	Night
I. At 7 a.m. Milk 200 ml. + 10 g. Sugar	At 12.30 p.m. Rice 250 g. + Vegetables 200 g.	At 4 p.m. Milk 150 ml. + 10 g. Sugar	At 7.30 p.m. Rice gruel 150 g. + Green Gram 25 g.
II. Rice gruel at 8.30 p.m.			

On *snehapana* period, little rice gruel was prescribed after complete digestion of *sneha* consumed.

**Table—II
Effect of Treatment**

Group	Before treatment	After treatment
	Mean \pm SEM	Mean \pm SEM
I	50.05 \pm 3.247	28.75 \pm 4.541*
II	48.85 \pm 2.98	26.75 \mp 4.68*

* P<0.01

30% and more relief was noted in 7 and 12 cases respectively in group I and II. Only in two cases out of thirteen, and in four cases out of eight *snehapana* could be given due to the indigestion complication. In remaining cases same *samana* treatment was continued for both the groups. The result in *snehapana* patients was less than 15% improvement, hence a course of *basti* was prescribed for both the groups. Better result was observed in fresh cases than in the chronic cases

(Table—III). According to modern diagnosis, aetiology due to intervertebral disc prolapse and of viral origin showed better response in *Bhadradarvadi* group as well as *Sahacaradi* group (Table I—IV). Radiological investigations revealed fracture/disc prolapse/dislocation of vertebra in seven cases and five cases in Group I and II respectively. Arthritis of spine was found in four cases in Group II. However, no radiological change was observed on final assessment after

Table—III
Duration-Wise Result

Duration of illness	Complete relief		Marked relief		Moderate relief		Mild relief		No relief		Total	
	G.I	G.II	G.I	G.II	G.I	G.II	G.I	G.II	G.I	G.II	G.I	G.II
Upto 15 days	—	—	1	1	—	—	—	—	1	—	2	1
15 days to 1 months	—	—	1	2	1	—	—	—	—	1	2	3
1-3 months	—	—	3	—	1	1	—	1	—	1	4	3
3-6 months	—	—	2	1	—	1	1	2	1	—	4	4
6-12 months	—	—	—	2	2	1	—	1	—	1	2	5
12-24 months	—	—	—	2	3	2	1	—	1	—	5	4
24 months and above	—	—	—	—	—	—	1	—	—	—	1	—
Total :	—	—	7	8	7	5	3	4	3	3	20	20

Table—IV
Modern Diagnosis and Result

Diagnosis	Group I		Group II		Result	
	Frequency	%	Frequency	%	Frequency	%
I. Inflammatory						
(a) Bacterial	1	27.281	—	—	—	—
(b) Viral	5	45.72	3	66.5	—	—
(c) Degenerative	7	38.81	6	51.48	—	—
II. Traumatic						
(a) Fracture and dislocation	3	23.21	5	42.28	—	—
(b) Osteoarthritis	—	—	4	49.28	—	—
(c) Intervertebral Disc prolapse	3	75.23	1	59.05	—	—
III. Congenital	1	36.54	1	21.5	—	—
Total :	20		20			

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**Table—V
Radiological Findings**

Findings	Group I		Group II	
	Before trial	After trial	Before trial	After trial
Fracture/Disc prolapse/dislocation of vertebra	7	No change	5	No change
Arthritis of spine	—	—	4	No change

completion of the trial. The changes in blood investigation reports were negligible and within the normal limits. The results of stool and urine investigation was also not significant.

Discussion

Tila-taila is considered to be an effective remedy for *Vataroga* especially where *Apana vayu* is involved. It's efficacy considerably increases by the *samskarana* (processing) with *Vatahara-dravyas*. The ingredients of *Bhadradarvadi taila-Fala* and *Atibala* possess *Guru* and *Snigdhagunas*, *Balya*, *Rasayana* and *Vatahara* properties and are good remedy for healing up of internal and external injuries (Bhavamisra, 1969) and hence they may be responsible for healing of lesions in the spinal cord which results in this disease. *Tagara* is recommended in diseases connected with brain like *Apasmara* and *Unmada*.

In addition it is also an effective drug against *Bhootagraha*, hence it is expected to give good response in neurological afflictions of viral/bacterial origin (Bhavamisra, 1969). *Kustha* is considered to be an *agryaoushadha* for *vatarogas* and massage with a mixture of *kustha choorna*, honey and ghee is recommended to increase the muscle power (Bhavamisra, 1969). *Devadaru* is well known for it's *vatahara* properties (Bhavamisra, 1969) and *Dasamoola* for *sophahara*, *soolahara*, *anulomana* and *Tridosha samana* properties (Vagbhata, 1957). All these properties of the ingredients of *Bhadradarvadi taila* may be responsible for the improvement seen. *Sahacara* is an effective drug for *vatarogas* in general. Pharmacological studies on rats has shown that it possess significant anti-inflammatory activity (Ravishankar, 1985). The *Katuthiktarasas* and *sophahara* and *soolahara* properties of *Sahacara* (Vaidya, 1936) in

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combination of *Taila taila* may be responsible for the improvement in *Khanja* and *Pangu* patients, especially in the cases of inflammatory origin and it is also effective in the disease of viral origin.

Conclusion

Bhadradarvadi taila and *Sahacaradi taila* were found effective in *Khanja* and *Pangu*. Results in both groups were statistically significant. *Sahacaradi taila* was found more effective in viral origin and degenerative cases and in both the groups good results were shown in intervertebral disc prolapse cases.

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REFERENCES

- | | | |
|------------------------------------|------|--|
| Bhavamisra | 1969 | <i>Bhavaprakasa</i> —Vidyotini commentary Chowkhamba Sanskrit Series Office, Banaras, pp. 366. |
| Bhavamisra | 1969 | <i>Bhavaprakasa</i> Vidyotini commentary Chowkhamba Sanskrit Series Office, Banaras, pp. 199. |
| Caraka | 1970 | <i>Caraka Samhita Cikitsa</i> 28 : 144. Chowkhamba Sanskrit Series Office, Banaras. |
| Caraka | 1970 | <i>Caraka Samhita Cikitsa</i> 28 : 181. Chowkhamba Sanskrit Series Office, Banaras. |
| Nair P. Ramachandran, <i>et al</i> | 1984 | Action of <i>Sahacaradi yoga</i> in <i>Khanja</i> and <i>Pangu</i> : <i>Ancient Science of Life</i> Vol. 1, No. 1, July pp. 20-27. |

EFFECT OF *Bhadradarvadi Taila* AND *Sahacaradi Taila* IN *Khanja* AND *Pangu*

- | | | |
|-------------------------------------|------|--|
| Nair, P. Ramachandran, <i>et al</i> | 1984 | A comparative study of Sahacaradi taila V. Nirgundi taila in <i>Khanja</i> and <i>Pangu</i> . <i>Journal of Research and Education in Indian Medicine</i> , Banaras. |
| Ravishankar, B. <i>et al</i> | 1987 | Analgesic, anti-inflammatory and Immuno-suppressant effect of <i>Strobilanthes heyneanus</i> Nees. Stem J.R.A.S. Vol VIII, No. 1&2 pp. 53-63. |
| Sharma, Priyavrata | 1969 | <i>Dravyaguna Vijnana</i> . The Chowkhamba Vidya Bhavan, Varanasi. pp. 81-82, 69-71, 550-560. |
| Susruta | 1966 | <i>Susrutha Samhita Nidana</i> 1 : 77 (Ayurveda thathwa sandeepika commentary) Chowkhamba Sanskrit Series Office, Banaras. |
| Vaghbata | 1957 | <i>Ashtanga Hridaya Sutra</i> 6 : 167, 197 and Chikitsa 22 : 23. Chowkhanda Sanskrit Series Office, Banaras. |
| Vaghbata | 1957 | <i>Ashtanga hridayam Nidana</i> 15 : 45 Chowkhamba Sanskrit Series Office, Banaras. |
| Vaghbata | 1957 | <i>Ashtanga hridayam Sootra</i> 12 : 9 Chowkhamba Sanskrit Series Office, Banaras. |
| Vaghbata | 1957 | <i>Asthnga hridayam Nidanam</i> 15 : 5, 6. Chowkhamba Sanskrit Series Office, Banaras. |
| Vaghbata | 1957 | <i>Ashtanga Hridayam Sareera</i> 3 : 68, 69, 4 : 5, 19. Chowkhamba Sanskrit Series Office, Banaras. |
| Vaghbata | 1957 | <i>Ashtanga hridaya Sootra</i> 15 : 5. Chowkhamba Sanskrit Series Office, Banaras. |
| Vaghbata | 1957 | <i>Ashtanga Hridaya Sootra</i> 19 : 64. Chowkhamba Sanskrit Series Office, Banaras. |
| Vaidya, K.M. | 1936 | The <i>Ashtanga hridaya Kosha</i> . The Mangalodayam Press, Trichur, pp. 601. |