ACTION OF SAHACHARADI YODA IN KHANJA AND PANGU

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ABSTRACT: Pangu is a disease caused by vitiated Vata. It is described among 80 Vata rogas. Sahacaradi yoga of Astanga Hrdaya was adopted for the study. Sixty patients of either sex selected from the Out Patient Department of the Institute were grouped into two at random. One group was put in Sodhana cum Samana and the other in Samana alone. The result in both blocks was statistically significant.

Introduction

Khanjata is a disease which is manifested as the drawing of kandaras of one of leg by the deranged Vata situated at the Kati region. When both legs are similarly affected the disease is called Pangu and they have been enumerated among the eighty main disorders of Vata. It originates at Kati due to the vitiated Vata, probably the Katyasritavata—that is, Apana Vau is involved. The manifestations like disturbance in urination and motion, loss of function and sensation, etc, could be attributed to Vyana Vayu and the Apana Vaigunya. Since the disease originates at Kati, the involvement of spinal cord cannot be ruled out. The definition of vata itself explains that the normal function of Vata is the regulation of motor and sensory systems. Therefore, vitiation of Vata leading to the onset of a disease usually manifests as an impairment of this function.

Dhatuksaya and Margavarana are the two basic factors for the Vataprakopa. But the actual manifestation including the extent of the body affected depends upon the place of Dasadusyasamurcchana. Since the disease originates at Kati the Dasadusyasamurcchana can be envisaged at spinal cord and hence a lesion in the spinal cord due to any reason impairs the normal functioning of lower limbs.

Material and Methods

Sixty cases of Khanja and Pangu were randomly selected for the trial and were grouped into two blocks of 30 cases each. The first block was put under Sodhana and Samana and the other under Samana alone. Sahacaradi yoga was selected for the trial, and the drugs were used in the following proportion which is largely in vogue in Kerala.
1. Sahacara (Nilgirianthus heyneanus Nees) : 3 Parts
2. Devadaru (Cedrus deodara) : 2 Parts
3. Sunthi (Zungiber officinale Rose) : 1 Part

Whole plant of Sahacara, stem of Devadaru and Sunthi as such were used for all preparations. Tila taila medicated with these drugs as per the formula described for oil preparations was used for Snehapan, Anuvasa and Abhyanga purposes. Decoction prepared as per he accepted formulations were used in Samana block and also in Samana period in the other block. The line of treatment adopted was as followed.

**Block-I**

1st to 7th day: Snehapan (Accha) with Sahacaradi taila.
8th to 10th day: Baspa sveda.
11th day: virecana with Eranda taila.
12th to 13th day ; Samsarjana
14th to 18th day: Samana treatment.
Sahacaradai kasaya 60 ml. + Sahacaradi taila 10ml. at 7 am and 5 pm.
Sahacaradi kasaya 60ml. at 1 pm.
Sahacaradi taila for Abhyanga 20 to 40 ml.
19th to 26th day: Yogabasti-Anuvasa with Sahacaradi taila and Niruha with Sahacaradi kasaya.
27th to 60th day: Samana treatment.
61st day: Discharge.

**Block-II**

Same Samana treatment as in Block-I from the 1st day onwards for 60 days.

**Diet**

Breakfast: Milk 200ml. with sugar 10gms. and Rava 75 gms. (boiled with milk).
Lunch: Rice 250gms. + vegetables 250gms.
Evening: Milk 150ml.with 10gms. sugar.
Supper: Rice gruel 200gms. + green gram 25gms.

Milk/Manda (Rice gruel liquid) and gruel were given to the Snehapan patients if required. Since Snehapan (Acchasneha) begins with a small dose of 40ml. and gradually increased, patients more often required some diet in the early days.

**Criteria for assessment**

Following criteria were selected to assess the neurological impairment of the patients. Each criterion was given numerical values (given in the bracket against each) totaling 100.

1. **Motor Functions.**

a) No movement (22)
b) Flickering movement (20)
c) Slight lateral or medial rotation of the limb (18)
d) Slight flexion in all joints possible (16)
e) Semi flexion in all joints (14)
f) Straight leg raising test above 10°
g) Patient can stand with support (10)
h) Walking with support (8)
i) Walking without support and climbing upstairs using banister (6)
j) Climbing upstairs without any help (4)
k) Can attain and regain squatting posture (2)
l) Normal (0)

2. **Muscle tone** (4)
   a) Hypotonia (4)
   b) Hypertonia (2)
   c) Normal (0)

3. **Fasiculations** (3)
   a) Severe (3)
   b) Moderate (2)
   c) Mild (1)

4. **Electric horea** (3)
   a) Severe (3)
   b) Moderate (2)
   c) Mild (1)

5. **Pressing power** (6)
   a) Compared with the standards

6. **Muscle wasting** (9)
   a) Absent (4+4)
   b) Exaggerated (2+2)
   c) Normal (0)

By measurements

7. **Walking speed** (4)

II. **Sensory Functions**

1. **Sensory changes** (16)
   a) No sensation (16)
   b) Impaired sensation (12)
   c) Partially appreciated (8)
   d) Cannot appreciate fully but almost normal (4)
   e) Normal (0)

2. **Pain (Symptom)** (3)
   a) Severe (3)
   b) Moderate (2)
   c) Mild (1)

III. **Reflexes**

1. **Plantar reflex** (6)
   a) No response (3+3)
   b) Extensor (2+2)
   c) Normal (0)

2. **Abdominal reflex** (2)
   a) Absent (1+1)
   b) Present (0)

3. **Tondon reflexes (Knee + Ankle)** (8)
   a) Patella (1+1)
   b) Ankle (1+1)
5. Micturition  (5)

a) Complete retention/incontinence (5)
b) Passing with sensation but without control (4)
c) Partial control (3)
d) Loss of control at times (2)
e) Normal (0)

6. Daefaecation  (5)

a) Complete retention/incontinence (5)
b) Passing with sensation but without control (3)
c) Normal

Investigations

X-Ray’s were taken in all the cases before starting the trial and at the end in those cases having initial lesions, Blood V D R L test was done to rule out venereal disease. Clinical and pathological investigations of blood, urine and stool were carried out. Serum cholesterol, blood sugar and serum proteins were estimated before and after the trial. Serum cholesterol was also estimated in Sodhana group at the end of Snehapana.

Result and discussions

Majority of cases under trial were from the age group of upto 20 years (24%) and fever in the age group of 51-60 years and 61-70 years (12%). Male patients were more (67%) than females (33%). Seventy-three percent of patients were Hindus while Christians were only 7%. Majority of patients were from hard working (30%) (Table IV). Sixty-five percent of the patients were free from any habits like Alcohol, smoking, chewing etc. Majority of the patients (65%) treated have middle school education. In Block I reduction of Polymorpho-nuclear neutrophils in the age group of 21-30 years and 61-70 years was significant. Lymphocytes increased in the age group of 21-30 years and 61-70 years and Eosinophils showed slight increase in the age group of 31-40 years. Serum cholesterol reduction was significant after Snehapana in 41-50 years age group (Table I). Slight increase was noticed in the age group of 21-30 years in Serum cholesterol level at the end of the trial compared to the reading after Snehapana. However, the final cholesterol level was less than the initial level (Table I and II). Reduction in Serum protein was significant in the age group of 41-50 years (Table II). However the changes were within the normal range. In Block II Pathological investigation did not show any significant change after the trial. Blood sugar level was significantly lowered in upto 20 years and 21-30 years age groups (Table III).
### TABLE – I

**Biochemical Investigations**

| Age group     | Frequency | Blood Sugar mg% | Serum cholesterol mg% | Serum cholesterol mg% |
|---------------|-----------|------------------|-----------------------|-----------------------|
|               |           | BT | AT | P Value | BT | ASP | P Value | BT | AT | P Value |
| Upto 20 years | 4         | 101.5±106.5± | N.S | 178.75 | N.S | 178.75 | N.S | 230± | N.S |
| 21-30 years   | 6         | 10.36 | 16.03 | ±46.39 | 5.71 | ±46.39 | 64.46 | N.S |
| 31-40 years   | 6         | 95.17±90.5± | N.S | 172.67 | N.S | 172.67 | N.S | 153.50 | N.S |
| 41-50 years   | 9         | 7.74  | 4.26  | ±20.23 | ±8.06 | ±20.23 | ±3.88 | N.S |
| 51-60 years   | 2         | 106.83 | 114.75 | N.S | 181.67±182.5± | N.S | 181.67 | N.S | 171.5 |
| 61-70 years   | 3         | 115.78 | 127.22 | N.S | 212.67±176.67 | P < 0.05 | 212.67 | 188.89 | N.S |

### TABLE – II

**Age group** | **Frequency** | **Serum cholesterol mg%** | **Serum protein mg%** |
|---------------|---------------|---------------------------|-----------------------|
|               |               | ASP | BT | P Value | BT | AT | P Value | ASP | BT | AT | P Value |
| Upto 20 years | 4             | 165±35.71 | 230±64.46 | N.S | 5.73±0.57 | 5.9±0.59 | N.S |
| 21-30 years   | 6             | 135.50±8.06 | 153.50±2.88 | P < 0.05 | 5.6±0.22 | 5.68±0.63 | N.S |
| 31-40 years   | 6             | 182.5±14.27 | 171.5±9.83 | N.S | 7.38±0.58 | 6.48±0.58 | N.S |
| 41-50 years   | 9             | 176.67±11.96 | 188.89±14.12 | N.S | 7.34±0.43 | 7.09±0.46 | P < 0.05 |
| 51-60 years   | 2             | 210.5±52.66 | 226.5±61.68 | N.S | 8.24±0.16 | 7.20±6.47 | N.S |
| 61-70 years   | 3             | 170.67 | 153.67 | N.S | 260±179.17 | N.S | 260±213.33 | N.S |

### TABLE – III

**Biochemical Investigations**

| Age group     | Frequency | Blood sugar mg% | Serum cholesterol mg% |
|---------------|-----------|------------------|-----------------------|
|               |           | BT | AT | P Value | BT | AT | P Value |
| Upto 20 years | 10        | 113.3±10.05 | 93.62±6.14 | P < 0.05 | 222±17.09 | 193.4±13.32 | N.S |
| 21-30 years   | 7         | 106.43±6.81 | 91.29±4.12 | P < 0.05 | 179.57±20.71 | 175.29±4.29 | N.S |
| 31-40 years   | 3         | 92.67±0.67 | 145.33±40.75 | N.S | 147.67±11.58 | 155±7.65 | N.S |
| 41-50 years   | 1         | 136    | 114  | 180 | 155 | N.S |
| 51-60 years   | 5         | 108.8±24.31 | 115.2±21.29 | N.S | 181.2±28.69 | 183±16.45 | N.S |
| 61-70 years   | 4         | 137±20.49 | 133±26.89 | N.S | 233.75±35.44 | 158.75± | N.S |
### TABLE – IV

| Age group      | Frequency | Serum protein mg% |        |        |
|----------------|-----------|-------------------|--------|--------|
|                |           | BT                | AT     | P Value|
| Upto 20 years  | 10        | 6.71±0.44         | 6.78±0.43 | N.S    |
| 21-30 years    | 7         | 5.97±0.54         | 6.4±0.42 | N.S    |
| 31-40 years    | 3         | 5.87±0.47         | 5.37±0.62 | N.S    |
| 41-50 years    | 1         | 4.0               | 4.50   | N.S    |
| 51-60 years    | 5         | 6.1±0.61          | 6.28±0.73 | N.S    |
| 61-70 years    | 4         | 5.75±0.35         | 5.88±0.5 | N.S    |

### TABLE – V

**Radiological findings**

| Block-I | Block-II |
|---------|----------|
| BT      | AT       | BT      | AT       |
| 1       | 5        | 5       | 3        |
| 2       | 3        | -       | -        |
| 3       | 2        | 2       | 1        |
| 4       | 4        | 3       | 3        |

### TABLE – VI

**Duration-wise Result**

| Duration of illness | Block-I | Block-II |
|---------------------|---------|----------|
|                     | Frequency | Result | Frequency | Result |
| Up to 15 days       | 1        | 100%    | 2         | 83%    |
| 15 to 3 months      | 11       | 68%     | 8         | 64%    |
| 3 to 6 months       | 6        | 47%     | 5         | 42%    |
| 6 to 12 months      | 4        | 56%     | 4         | 52%    |
| 12 to 24 months     | 8        | 45%     | 11        | 51%    |

- Percentage of patients getting relief.
Radiological investigation revealed vertebral fracture and consequent compression of spinal cord in 5 cases in block I and in 3 cases in block II, scoliosis and bone displacement in 3 cases in block I, ankylosing spondylitis in 2 cases in block I and in one case in block II, and osteoarthritis spine in 4 in block I and in 3 in block II in the initial X-rays. However, the lesions observed in the initial X-rays did not show any change after treatment (table V). In remaining cases pathological biochemical and radiological investigations did not show any significant change.

The result in both blocks show statistically significant improvement. Fourteen percent of the patients were completely cured; forty-three percent got marked relief, twenty-seven percent moderate relief and thirteen percent mild relief in block I. In comparison, three percent were completely cured, sixty-three percent got marked relief, seventeen percent moderate relief and fourteen percent mild relief in block II. Three percent of cases in both blocks didn’t show any improvement. On analysis of the result with duration of illness, the general was obtained where the duration of illness was shorter. (Table VI, VII and VIII)

Conclusion

Clinical improvement in both blocks was encouraging. Sahacharadi yoga has been proved to be an effective medicine for Khanja and Pangu. There is no marked

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### TABLE-VII

| Result                | Block I | %  | Block II | %  |
|-----------------------|---------|----|----------|----|
| Complete relief       | 4       | 14%| 1        | 3% |
| Marked relief         | 13      | 43%| 19       | 63%|
| Moderate relief       | 8       | 27%| 5        | 17%|
| Mild relief           | 4       | 13%| 4        | 14%|
| No relief             | 1       | 3% | 1        | 3% |
| **TOTAL**             | 30      | 100%| 30       | 100%|

### TABLE-VIII

| Neurological Evaluation | Block I | Neurological Evaluation | Block II |
|-------------------------|---------|-------------------------|----------|
| Marks in (%)            | BT      | AT          | P. Value | BT      | AT          | P. Value |
| BT – Before trial       | 48.50±2.36 | 23.00±3.27 | P < 0.001 | 46.27±2.77 | 20.77±2.75 | P < 0.001 |
| AT – After trial        |         |             |          |         |             |          |
| N.S. – Not significant  |         |             |          |         |             |          |
| ASP – After Snehapana   |         |             |          |         |             |          |
| Statistical analysis by student’s paired ‘t’ test. |
difference on results between the groups (Block I & Block II)

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