THE EFFECTIVENESS OF TAALISHADI CHURNA COMPARED WITH SITOPALADI CHURNA IN THE MANAGEMENT OF KASA

Sirjana Shrestha1, Shankar Gautam2, Sabbu Thasineku1, Jitendra Shrestha3, D.L. Bharkher4, Binod Kumar Singh5*

1Teaching Assistant, Ayurveda Campus, IOM, TU, Kathmandu, Nepal.
2P.G. Scholar, PG Dept. of Kayachikitsa, National Institute of Ayurveda, Jaipur.
3National Ayurveda Research and Training Centre, Kirtipur, Kathmandu, Nepal.
4Professor and Chairman, Nepal Ayurveda Medical Council, Kathmandu, Nepal.
5Ph.D Scholar, PG Dept. of Kayachikitsa, National Institute of Ayurveda, Jaipur, India.

ARTICLE INFO
Article history:
Received: Nov 13, 2020
Revised: Dec 10, 2020
Accepted: Jan 28, 2021

Keywords: Kasa, Sitopaladi Churna, Taalishadi Churna, Cough, Respiratory disorder.

ABSTRACT

Introduction: Kasa is a Vata-kapha pradhana disease, caused due to Vata vimargagaman and Pranavaha shrotodusti. Due to the various similarities in its clinical presentation, Kasa can be correlated with cough (bronchitis). According to National center for health statistics, 62 million cases of common cold and cough occurs each year.

Methodology: A total of 44 patients diagnosed as Kasa were randomly divided as per the lottery system of randomization. The patients of Group A were given 5 gram of Sitopaladi Churna twice a day for 30 days. The patients of Group B were given 5 gram of Taalishadi Churna twice a day for 30 days. The patients of both the groups were supposed to follow the dietary and behavioural advices. The response of the drug was assessed at pre-treatment and post-treatment time.

Results: There was equal significant change in all of the Roga bala, Agni bala and Deha bala parameters by both Sitopaladi and Taalishadi Churna. It was revealed that all other blood parameters except Hb, TLC and Neutrophil count used in the study were not significant in both the groups. Both drugs were found equally highly significant (p< 0.0001) in Sushka kasa and Swarabheda. Sitopaladi churna was more effective in relieving Hritparswashool (p=0.002) whereas Taalishadi churna is more effective in reducing Pitanisthivanam (p=0.007). In case of Nirghosh, Sitopaladi churna was more effective (p<0.0001). On the other hand, Taalishadi churna was more effective in relieving Peenasa (p<0.001).

Conclusion: Both Sitopaladi Churna and Taalishadi Churna were found to be equally effective in the treatment of Kasa.

INTRODUCTION

Kasa is a Vata-kapha pradhana disease, caused due to Vata vimargagaman and Pranavaha shrotodusti. Kasa is one of the most common disease which if neglected may cause complications like Swarabheda, Vamana, Swasa, Kshaya. The word Kasa implies ‘to move’ or ‘to afflict’. Since ‘Kasa’ involves the movement of Vata in the upper part of the body and because it also afflicts chest etc., it is called ‘Kasaroga’. Kasa has been described under various categories in the classics of Ayurveda as an independent disease[2,3], symptom[4], complication[5] and sequel. Due to the various similarities in clinical presentation, Kasa is correlated with cough (bronchitis)[1,4]. Acharya Charaka has defined Kasa as ‘Shusko va sa kapho va api kasanath kasaha’, that means the release of obstructed Vayu resulting in the production of abnormal sound in the process, which may be productive or dry is called Kasa.[6]
A recent meta-analysis in 2015 A.D. indicated that the prevalence of chronic cough is 2-7% in Asia, 10-15% in Europe and 8-14% in the USA.[7] According to National center for health statistics, 62 million cases of common cold and cough occurs each year. Cough is the fifth most common symptom for which patients seek effective medical care.[8] Due to rapid industrialization and household, vehicles and industrial causes, pollution is increasing highly in the developing countries like Nepal and thus the prevalence of cough has increased. Every system of medicine must contribute to establish the effective treatment modality. In an order to put some effort in this we had made an attempt to compare the effectiveness of Taalishadi churna with Sitopaladi churna in the management of Kasa.

Methodology

Study Design

It was a quasi-experimental study and open label clinical trial. Patients with Kasa were the study population. Patients visiting the OPD of TU Ayurveda Teaching Hospital and diagnosed with Kasa was the sampling frame of the study. Patients of Kasa who were not under medication was the target population of this study.

Ethical Clearance

Ethical approval for this study was obtained from the IRB (Institutional Review Board), IOM, TU with Ref No. 377 (6-11-E)2/073/074. An informed written consent form was read to the patients and the form was handed to the subject to decide whether to participate or not and informed consent was obtained from all the subjects included in the study. Those not willing to give the informed consent were not included in the study.

Sample size

The total sample size was 44. It was divided into two groups each having 22 participants. Thus the sample size of each group was 22.

Sampling Method

The total 44 participants were divided into two groups randomly as per the lottery system of randomization. In case of drop outs, the number of sample size was maintained by enrolling the new cases.

Inclusion Criteria/ Eligibility

a. Patients of either sex with age between 16 and 70 years.
b. Patients of Kasa who are not under medication for last 3 months.

Exclusion Criteria

a. Patients with diabetes and other serious illness.
b. Patients with cough associated with chest injuries, haemoptysis and bronchial carcinoma.
c. Pregnant and lactating women.

Investigations

Haemoglobin (Hb), Total leucocyte count (T.L.C.), Differential leucocyte count (D.L.C.), Erythrocyte Sedimentation Rate (E.S.R), Chest X-Ray and AFB Sputum Test (If necessary).

Interventions

Trial Drugs: Group A- Sitopaladi churna[9] and Group B- Taalishadi churna[10]

Dose: 5gm twice a day after meals

Dosage form: Churna (Powder)

Route of administration: Oral

Time of administration: Twice a day after meals

Anupana: Madhu (Honey)

Duration of study: 30 days

Follow up: 15 days

Note: Patients were guided thoroughly regarding Pathya/Apathya regimen.

Outcomes

Change in the clinical symptoms of Kasa
Change in the blood Hb%, T.L.C, D.L., E.S.R.
The outcomes were measured after screening at baseline (BT) and at the end of 30 days (AT).

Methods of measurement

The data were collected with the help of case sheet specially designed for the study. The response of the drug was assessed pre-treatment and post-treatment in both the case of Group A and Group B.

The improvement in the patients was assessed mainly on the basis of relief in the cardinal symptoms of disease and blood tests for CBC and ESR. To assess the effect of therapy objectively, all the signs & symptoms were given scoring pattern depending upon their severity. Rogabala was used to assess the degree of disease activity of Kasa (Table 1), Dehabala was used to assess the physical condition of the patient (Table 2) and Agnibala was used to assess the state of digestion related symptoms (Table 3).

Total effect of the therapy was considered as:

Complete remission: 75-100% relief in sign and symptoms of Kasa
Marked improvement: 50-74% relief in sign and symptoms of Kasa
Moderate improvement: 25-49% relief in sign and symptoms of Kasa
No improvement: Less than 25% relief in sign and symptoms of Kasa
### Table 1: Rogabala Assessment Criteria

| S. No. | Lakshana                        | Stages                                | Scoring |
|--------|---------------------------------|---------------------------------------|---------|
| 1.     | Sushka kasa (Dry coughing)      | No cough                              | 0       |
|        |                                 | Intermittent cough                    | 1       |
|        |                                 | Constant cough                        | 2       |
|        |                                 | Worsened cough                        | 3       |
| 2.     | Hritparswashool (Chest pain)    | No pain                               | 0       |
|        |                                 | Mild chest pain while coughing        | 1       |
|        |                                 | Moderate chest pain while coughing    | 2       |
|        |                                 | Pain is disturbing daily routine      | 3       |
| 3.     | Swarbhedha (hoarseness of voice)| No hoarseness of voice                | 0       |
|        |                                 | Mild hoarseness of voice              | 1       |
|        |                                 | Moderate hoarseness of voice          | 2       |
|        |                                 | Severe hoarseness of voice            | 3       |
| 4.     | Pitanisthivam (Yellowish sputum)| No sputum                             | 0       |
|        |                                 | Small quantity of yellowish sputum    | 1       |
|        |                                 | Moderate quantity of yellowish sputum | 2       |
|        |                                 | Large quantity of yellowish sputum    | 3       |
| 5.     | Nirghosh (Resonant sounds)      | No complaints                         | 0       |
|        |                                 | Mild resonant sounds                  | 1       |
|        |                                 | Moderate resonant sounds              | 2       |
|        |                                 | Severe resonant sounds                | 3       |
| 6.     | Bahala, Snigda, sweta nishteevana| No productive cough                   | 0       |
|        |                                 | Serous expectoration of traces of thick sputum | 1 |
|        |                                 | Moderately thick whitish sputum       | 2       |
|        |                                 | Thick large quantity of whitish sputum| 3       |
| 7.     | Peenasa (running nose)          | No nasal discharge                    | 0       |
|        |                                 | Nasal discharge in less quantity      | 1       |
|        |                                 | Yellowish discharge with heaviness in head and low grade fever | 2 |
|        |                                 | Yellowish nasal discharge with heaviness in head and fever | 3 |

### Table 2: Dehabala Assessment Criteria

| S. No. | Lakshana                     | Stages                                             | Scoring |
|--------|------------------------------|----------------------------------------------------|---------|
| 1.     | Swara Varna Yoga            | Looks cheerful                                     | 0       |
|        |                              | Looks gloomy                                       | 1       |
|        |                              | Looks tired and lethargic                          | 2       |
|        |                              | Looks depressed                                    | 3       |
| 2.     | Sharira Upachaya            | Weight increase by more than 2 kg                  | 0       |
|        |                              | Weight increased by 2 kg                           | 1       |
|        |                              | Weight increased by 1 kg                           | 2       |
|        |                              | No increase in weight                              | 3       |
| 3.     | Balavriddhi                 | Normal body strength and able to do work as usual  | 0       |
|        |                              | Reduced body strength but does not interfere with routine works | 1 |
|        |                              | Reduced body strength and gets fatigued with little work | 2 |
|        |                              | Generalised weakness affecting daily routine      | 3       |
Table 3: Agnibala Assessment criteria

| S. No. | Lakshana                        | Stages                                      | Scoring |
|--------|---------------------------------|---------------------------------------------|---------|
| 1.     | Jirna Ahara Lakshana            | Presence of all five symptoms after 6 hrs   | 0       |
|        |                                 | Presence of four symptoms after 6 hrs       | 1       |
|        |                                 | Presence of three symptoms after 6 hrs      | 2       |
|        |                                 | Presence of two symptoms after 6 hrs        | 3       |
| 2.     | Ruchirahara Kale                 | Equal willing towards all Bhojya Padartha   | 0       |
|        |                                 | Willing towards some specific Ahara or Rasavishesha | 1       |
|        |                                 | Willing towards only most liking food and not to other | 2       |
|        |                                 | Unwilling for food, but takes meal          | 3       |
| 3.     | Abhyavarana-Abhilasha           | Taking food in normal quantity twice a day  | 0       |
|        |                                 | Taking food in moderate quantity twice a day | 1       |
|        |                                 | Taking food in less quantity twice a day    | 2       |
|        |                                 | Taking food in less quantity once a day     | 3       |

Statistical Design

For assessing the response of the study, the data from all the parameters were analyzed using Microsoft Office Excel 2007 and IBM SPSS Statistics 21 as per the study design. The mean, standard deviation, standard error, ‘t’ value, ‘p’ value were calculated. Paired t-test and independent t-test were used as the statistical tool for the purpose of the analysis. The total result including the overall effect of therapy was presented in tables and as bar diagram for both groups. The results were compared within and between the groups. All the tables of chapter 4 were generated by using the SPSS and the entire bar diagrams were generated by using the Microsoft Office Excel 2007.

Observation and Results

Age wise distribution showed that 36.36% of patients were Yuva, 36.36% were Madhyama and 27.27% were Vriddha. Gender wise distribution showed that 31.82% of patients were male and 68.18% were female. Religion wise distribution showed that most of the participants i.e, 88.64% of patients were Hindu, 9.09% were buddhist and only 2.27% were Muslim because the study area was Hindu dominant population. Ethnicity wise distribution showed that 40.91% of patients were Brahmin, 31.82% were Newar, 18.18% were Kshetri, 4.55% were Tharu, only 2.27% were Limbu and 2.27% were Muslim. Occupation wise distribution showed that 36.36% of participants were housewives, 22.73% of participants were in job and 6.82% were in business, 27.27% were student and 6.82% were retired. According to the family history of Bronchial Asthma/PTB, it showed that 27.27% of the participants were with family history of Br. Asthma, only 2.27% with PTB and 70.45% without Bronchial Asthma or PTB. Dietary habit shows 81.82% were non-vegetarians and only 18.18% were vegetarians. Smoking Habit wise distribution of the participants showed that 13.64% of the participants were ex-smoker, only 9.09% were smoker and 77.27% were non-smoker. Preferred Rasa in Ahara wise distribution of the participants showed that 20.45% of the participants preferred Madhura rasa, 4.55% preferred Amla rasa, 13.64% preferred Lavana rasa and 2.27% preferred Katu rasa and most of the participants i.e. 59.09% preferred mixed rasa. Prakriti wise distribution of the participants showed that 63.64% of the participants were of Vata-pitta prakriti, 15.91% were of Pitta-kapha prakriti and 20.45% were of Kapha-vata prakriti. Status of age wise distribution of the participants showed that 27.27% of the participants had Sama agni, 11.36% had Vishama agni, 56.82% had Manda agni and only 4.55% had Tikshna agni.

The mean score of subjective parameters, relief and significance of Group A and Group B has been shown in Table 4 and that of Objective parameters has been shown in Table 5. After analysing statistically in Sushka kasa and Svarabheda, both drugs were found equally highly significant (p<0.0001). Sitopaladi churna was more effective in relieving Hritparswashool (p=0.002) than Taalisahidi churna (p=0.005). Whereas Taalishadi churna is more effective in reducing Pitanisthivanam (p=0.007) than Sitopaladi churna (p=0.015). In case of Nirghosh, Sitopaladi churna was more effective (p<0.0001) than Taalisahidi churna (p=0.002). On the other hand, Taalishadi churna was more effective in relieving Peenasa (p<0.001) than Sitopaladi churna (p=0.0001).

Relief percentage showed that Sitopaladi churna brought 73.91% relief in Sushka kasa while Taalishadi churna brought 91.27% relief. In case of...
Hritparswashool, Sitopaladi churna brought 75% relief while Taalishadi churna brought 87.5% relief. Swarbheda was decreased by 87.04% by Group A drug and 76.67% by B group drug. Pitanisthivanam was almost equally relieved, 94.4% and 95.24% by Group A and Group B medicine. Sitopaladi churna relieved Nirghosh by 93.6% and Taalishadi churna relieved by 91.67%, 78.3% and 74.24% relieved by Group A and B drug respectively in Swetanisthivanam. Taalishadi churna gave good result in case of Peenasa i.e., 97.62% relief compared to 87.87% by Sitopaladi churna. (Fig 1, Table 4, 5).

In analyzing the total efficacy of therapy, it is found that Group A has 54.54% and Group B has 77.27% complete remission in relieving subjective parameters of Roga bala (Fig 2).

### Table 4: Effect of Interventions on Subjective Parameters

| Parameters            | Drugs given | Mean score of BT | Mean score of AT | Mean score Difference | % Relief | S.D. (+) | S.E. (+) | ‘t’ Value | Significance (2-tailed) |
|-----------------------|-------------|------------------|------------------|-----------------------|----------|----------|----------|-----------|------------------------|
| Sushka kasa           | Gr. A       | 1.739            | 0.39             | 1.409                 | 73.91    | 0.79     | 0.169    | 8.299     | 0.000                  |
|                       | Gr. B       | 1.682            | 0.227            | 1.4545                | 91.27    | 0.74     | 0.157    | 9.238     | 0.000                  |
| Hritparswashool       | Gr. A       | 0.652            | 0.174            | 0.50                  | 75       | 0.6726   | 0.1434   | 3.487     | 0.002                  |
|                       | Gr. B       | 0.591            | 0.091            | 0.50                  | 87.5     | 0.74     | 0.1578   | 3.169     | 0.005                  |
| Swarbheda             | Gr. A       | 1.174            | 0.174            | 1.0455                | 87.037   | 0.7222   | 0.154    | 6.789     | 0.000                  |
|                       | Gr. B       | 1.125            | 0.375            | 0.9091                | 76.667   | 0.8122   | 0.1729   | 5.257     | 0.000                  |
| Pitanisthivanam       | Gr. A       | 0.478            | 0.0435           | 0.45                  | 94.44    | 0.8004   | 0.1707   | 2.664     | 0.015                  |
|                       | Gr. B       | 0.591            | 0.0455           | 0.5455                | 95.238   | 0.8579   | 0.1829   | 2.982     | 0.007                  |
| Nirghosh              | Gr. A       | 0.783            | 0.087            | 0.7273                | 93.589   | 0.7025   | 0.1498   | 4.856     | 0.000                  |
|                       | Gr. B       | 0.773            | 0.091            | 0.6818                | 91.667   | 0.8937   | 0.1905   | 3.578     | 0.002                  |
| Swetanisthivan        | Gr. A       | 0.826            | 0.217            | 0.6364                | 78.33    | 0.7895   | 0.1683   | 3.780     | 0.001                  |
|                       | Gr. B       | 1.091            | 0.318            | 0.7727                | 74.242   | 0.9223   | 0.1966   | 3.930     | 0.001                  |
| Peenasa               | Gr. A       | 0.913            | 0.13             | 0.8182                | 87.88    | 0.958    | 0.2042   | 4.006     | 0.001                  |
|                       | Gr. B       | 1                | 0.045            | 0.9545                | 97.62    | 0.8985   | 0.1916   | 4.983     | 0.000                  |
| Jirnaahara lakshana   | Gr. A       | 1.609            | 0.435            | 1.2273                | 75.83    | 0.6853   | 0.1461   | 8.399     | 0.000                  |
|                       | Gr. B       | 1.591            | 0.182            | 1.4091                | 91.27    | 0.7964   | 0.1698   | 8.299     | 0.000                  |
| Ruchiraharakale       | Gr. A       | 1.652            | 0.435            | 1.2727                | 77.78    | 0.6311   | 0.1345   | 9.459     | 0.000                  |
|                       | Gr. B       | 1.773            | 0.273            | 1.5                   | 87.5     | 0.8018   | 0.1709   | 8.775     | 0.000                  |
| Abhyavaran abhila      | Gr. A       | 1.522            | 0.304            | 1.2727                | 83.33    | 0.7025   | 0.1498   | 8.498     | 0.000                  |
|                       | Gr. B       | 1.545            | 0.091            | 1.4545                | 95       | 0.7385   | 0.1575   | 9.238     | 0.000                  |
| Swarvarnayoga         | Gr. A       | 1.565            | 0.304            | 0.3182                | 83.33    | 0.7162   | 0.1527   | 8.632     | 0.000                  |
|                       | Gr. B       | 1.773            | 0.182            | 1.5909                | 92.85    | 0.8541   | 0.1821   | 8.737     | 0.000                  |
| Sharirarupachaya      | Gr. A       | 2.869            | 2.174            | 0.7273                | 23.19    | 0.6311   | 0.1345   | 5.405     | 0.000                  |
|                       | Gr. B       | 3                | 1.955            | 1.0455                | 33.33    | 0.4857   | 0.1036   | 10.095    | 0.000                  |
| Balavridhi            | Gr. A       | 1.478            | 0.304            | 1.2273                | 70.83    | 0.7516   | 1.602    | 7.659     | 0.000                  |
|                       | Gr. B       | 1.636            | 0.273            | 1.3636                | 85.71    | 0.6580   | 0.1403   | 9.721     | 0.000                  |

### Table 5: Effect of Interventions on Objective Parameters

| Parameters | Group | Mean score of BT | Mean score of AT | Mean score Difference | % | Paired t test |
|------------|-------|------------------|------------------|-----------------------|---|---------------|
|            |       |                  |                  |                       |   | S.D. | S.E. | ‘t’ Value | Sig. (2-tailed) |
| Hb %       | Gr. A | 13.59            | 13.88            | 0.291                 | 2.142 | 1.1646 | 0.2428 | 1.198     | 0.244                  |
|            | Gr. B | 13.53            | 14.69            | 1.168                 | 8.634 | 0.7962 | 0.1660 | 7.036     | 0.000                  |
| TLC        | Gr. A | 9427.273         | 8223.182         | 1204.091              | 12.772 | 13699.989 | 285.664 | 4.215     | 0.000                  |
|            | Gr. B | 8654.545         | 7875.909         | 778.636               | 8.996 | 18973.63 | 395.627 | 1.968     | 0.062                  |
| Neutrophil | Gr. A | 62.682           | 57.909           | 4.7727                | 7.614 | 7.67033 | 1.5966 | 2.989     | 0.007                  |
## Taalishadi Churna Compared with Sitopaladi Churna in the Management of Kasa

| Count       | Gr. B | 57.455 | 6.09 | 6.15837 | 1.2841 | 2.903 | 0.008 |
|-------------|-------|--------|------|---------|--------|-------|-------|
| Lymphocyte count | Gr. A  | 34.955 | 35.5 | 0.54545 | 1.56  | 5.58998 | 1.16559 | 0.0468 | 0.644 |
|             | Gr. B  | 35.727 | 35.091 | 0.63636 | 1.78 | 6.0943 | 1.27074 | 0.501  | 0.622 |
| Eosinophil count | Gr. A  | 2.864 | 2.727 | 0.136363 | 4.78 | 2.07354 | 0.43236 | 0.315  | 0.755 |
|             | Gr. B  | 2.409 | 2.136 | 0.27273 | 11.332 | 1.60062 | 0.33375 | 0.817  | 0.423 |
| Monocyte count | Gr. A  | 1.136 | 1.045 | 0.090909 | 8.01 | 1.64894 | 0.34382 | 0.264  | 0.794  |
|             | Gr. B  | 1.136 | 1.5 | 0.3636 | 32.042 | 2.2872 | 0.4769 | 0.762  | 0.454  |
| Basophil Count | Gr. A  | 0.136 | 0.045 | 0.90909 | 66.91 | 0.28747 | 0.0599 | 1.517  | 0.144  |
|             | Gr. B  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESR         | Gr. A  | 17.5 | 15.682 | 1.81818 | 10.388 | 6.1395 | 1.28018 | 1.420  | 0.170  |
|             | Gr. B  | 10.388 | 10.479 | 1.5909 | 1.847 | 4.13036 | 0.86124 | 1.847  | 0.078  |

### Fig 1. Percentage of Relief in Parameters

| Parameter | Relief in Gr. A | Relief in Gr. B |
|-----------|----------------|----------------|
| SushkaKasa |                |                |
| Hritparshool |               |                |
| Swarhida    |                |                |
| Pitanisthivanam |           |                |
| Nirbhidh |                |                |
| Peenasaa    |                |                |
| Jirnaahalaksana |         |                |
| Ruchiharakale |             |                |
| Ahbyaraahabishaka |         |                |
| Swarnayoga |                |                |
| Balaviriddhi |                |                |
| Haemoglobin (Hb)% |         |                |
| Total Leucocyte count |         |                |
| Neutrophile |                |                |
| Eosinophil |                |                |
| Monocyte |                |                |
| Basophil |                |                |
| Erythrocyte |               |                |

### Fig 2: Overall improvement on the Subjective parameters of *Roga bala*

| Complete remission | Group A% | Group B% |
|--------------------|----------|----------|
|                     | 54.54    |          |

| Marked improvement | Group A% | Group B% |
|--------------------|----------|----------|
|                     | 31.81    |          |

| Moderate improvement | Group A% | Group B% |
|----------------------|----------|----------|
|                      | 18.18    |          |

| No improvement      | Group A% | Group B% |
|---------------------|----------|----------|
|                     | 13.64    | 4.54     |

| Group A% | Group B% |
|----------|----------|
| 0        | 0        |
DISCUSSION

Cough is an important respiratory symptom because it cannot only sometimes suggest serious underlying medical conditions but also cause serious complications and significantly affect a patient’s lifestyle and sense of wellbeing.[13] There are a number of preparations described in Ayurveda for the management of Kasa. Sitopaladi Churna and Taalishadi Churna are two of the preparations described in various Ayurvedic literatures mentioning their actions like Tikshna, Ushna, Vata-Kaphahara, Deepana, Roochana, Swashara, Kasahara. Therefore they can help to reduce the growing human burden associated with cough. These preparations have an advantage of being used in the community for centuries since Samhita kala.

Sitopaladi churna is very effective in curing disorders like Swasa, Kasa, Kshaya, Hastapa padanga daha, Mandagni, Shuptajihvatwo, Parshwashoola, Aruchi, Jwara, Urdhwogat Rakta-pitta. Charak has mentioned Pippali in Kasahara and Kanthya gana. Pippali has Snigdha, Vrishya, Katu ras, Madhura vipaka, Sara guna, Vata-kaphahara, Swas-kasahara properties. Twak, and Ela have Tikshna, Ushna, Rukshya, Pittapракopak, Rochana, Deepana properties. Sitopaladi Churna is a polyherbal Ayurvedic formulation used as an antitussive, analgesic and antipyretic.[12]

Taalishadi churna is very effective in curing disorders like Kasa, Swasa, Jwara, Chhardi, Aruchi, Atisara, Schosha, Sotha, Adhmana, Hridroga, Plihavriddhi, Grahan, and Pandu roga. It is also rochana, pachana, deepana, madhu vatanulomaka. Taalispatra has antitussive properties,[13,14] Zingiber officinale has antitussive properties.[15] Sunthi has Deepana, Brishya, Grahi, Hridya, Bibandhanut, Ruchhya, Laghu, Swadupaka, Snigdha, Usna, Kaphavatajita properties. Maricha has Katu ras and Katu vipaka, Laghu and Kaphaghnam properties. Pippali has Snigdha, Vrishya, Katu rasa, Madhura vipaka, Sara guna, Vata-kaphahara, Swas-kasahara properties. Twak, and Ela have Tikshna, Ushna, Rukshya, Pittapракopak, Rochanam, Deepanam properties. Therefore, due to different properties of ingredients in Taalishadi churna, it is effective in both types of cough-productive and non-productive. Due to high content of Misri (crystallized sugar lumps), it becomes more useful in non-productive cough. However, the other ingredients in Taalishadi churna have antitussive, mucolytic and expectorant action, which make it effective.

The clinical data of this study regarding the Roga bala parameters supports the view that both these drugs are equally moderately highly potent in relieving Kasa signs and symptoms in patients. There was further evidence that Taalishadi churna is as effective as Sitopaladi in ameliorating all the clinical symptoms of Kasa like Sushka kasa, Hritparswashool, Swarbhedha, Pitanisthivanam, Nirghosh, Swetanisthivanam and Peenasa.

There was equally very highly significant change in all of the Agni bala (p<0.0001) and Deha bala parameters (p<0.0001) when treated with both Sitopaladi and Taalishadi Churna and further gave evidence that Taalishadi churna is as effective as Sitopaladi in improving the Agni bala like Jirnaaharahalakshana, Ruchiraharakale and Abhyavaranaabhilasha and Deha bala like: Swarvarna, Yog, Shariraupachaya and Balavriddhi.

The quantitative analysis of Hb% revealed that Taalishadi Churna is more significant than Sitopaladi Churna in increasing Hb% level. The change in Total leucocyte count was significant in Sitopaladi churna group whereas it was not significant in Taalishadi churna group. In case of Neutrophil count, it was significant in both the groups. Further the study revealed that all other blood parameters used in the study were not significant in both the groups.

Although it was well tried to use a centralized laboratory before and after treatment, there were few cases who had used other laboratories for haematological tests. This may lead to variations in the test reports. So, using a centralized laboratory might have improved the quality of the study.

There was no provision of blindness in this clinical research. The provision might have allowed some sort of biasness in the result of the trial. The sample size of this study may not be adequate to determine the effectiveness of the drugs. The time duration of treatment was for 30 days, which may be insufficient for some chronic cases of kasa. Increasing the time frame of treatment might have brought much good results in subjective and objective parameters.

This study, though collected data pertaining to all the clinical features, evaluate the effectiveness of the interventions based on the analysis of certain clinical features leaving the other data. A study design with different parametric assessment would be advocated so that the evaluation can be made in the basis of analysis of all the clinical features.

CONCLUSION
Sitopaladi Churna and Taalishadi Churna both were found to be effective in the treatment of Kasa. The effectiveness varies on the presenting clinical features, thus the proper assessment of signs and symptoms and the judicial use of these drugs is essential for highly effective treatment of Kasa.

REFERENCES

1. Babu SS. The Principles and Practice of Kaya Chikitsa (Ayurveda’s Internal Medicine). Varanasi, India: Chaukhamba Orientalia; reprint ed. 2012.p.204. (Vol. II).
2. http://www.cdc.gov/nchs/data/ahcd/nhamcs_outpatient/2010_opd_web_tables.pdf
3. Sushrut. Susruta Samhita with Susrutavimarsini Hindi commentary by Sharma AR. 2000 ed. Gopal Mandir Lane, Varanasi, India: Chowkamba Subharati Prakashan; 2008. p.432. (Vol. III)
4. Harita. Harita Samhita with Hari Hindi Commentary by Tripathi HP. 2nd ed. Gopal Mandir Lane, Varanasi, India: Chowkamba Krishna Das Academy; ed. 2009, p.309.
5. Harita. Harita Samhita with Commentary by Sastri R. Varanasi, India: Prachya Prakashan; ed. 1985., p.230.
6. Agnivesa. Caraka Samhita with Charaka-Chandrika Hindi commentary edited by Tripathi B. 2005 ed. Gopal Mandir Lane, Varanasi, India: Chowkamba Surbharati Prakashan; 2005. p.641-667. (Vol. II)
7. Song WJ, Chang YS, Faruqi S, Kim JY, Kung MG, Kim S, Jo EJ, Kim MH, Plevkova J, Park HW, Cho SH, Morice AH. The global epidemiology of chronic cough in adults: a systemic review and meta-analysis. Eur Respir J. 2015; 45; 1479-1481.
8. Schappert SM, Burt CW. Ambulatory care visits to Physician’s offices, hospital outpatient departments, and emergency departments: United States, 2001–2002.In: National center of health statistics. Vital Health Stat 20 2006; 13:1–66.
9. Siddinandana Mishra. Bhaishajyaratnawali (Rajyakshmarogadhikara, 27-28). Varanasi; Chaukhamba Subharati Prakashan; 2017. p.407.
10. Siddinandana Mishra. Bhaishajyaratnawali (Kasarogadhikara, 36-37). Varanasi; Chaukhamba Subharati Prakashan; 2017. p.441
11. Chung KF, Pavord ID. Chronic cough 1. In: Prevalence, pathogenesis, and causes of chronic cough. Lancet 2008; 371:1364–74.
12. Pattanayak P, Panda SK, Dash S, Behera M, Mishra SK. Study of Anti-Tussive Activity of Sitopaladi Churna: A Poly-Herbal Formulation. International Journal of Pharmaceutical Sciences Review & Research. 2010;4(2).
13. Ghosh AK, Bhattacharya S: Planar Chromatographic Studies on Abies Webbiana Leaves, International Journal of chem. tech research 2009; 1(4):807.
14. Nayak SS, Ghosh AK, Srikanth K, Debnath B, Jha T. Antitussive activity of Abies webbiana Lindl. leaf extract against sulphur dioxide-induced cough reflex in mice. Phytotherapy Research: An International Journal Devoted to Pharmacological and Toxicological Evaluation of Natural Product Derivatives. 2003 Sep; 17(8):930-2.
15. Akhila A, TeWari R. Chemistry of ginger: A review. Curr. Research. Med. Arom. Plants, 1984; 6(3):143-156.

Cite this article as:
Sirjana Shrestha, Shankar Gautam, Sabbu Thasineku, Jitendra Shrestha, D.L. Bharkher, Binod Kumar Singh. The Effectiveness of Taalishadi Churna Compared with Sitopaladi Churna in the Management of Kasa. International Journal of Research in AYUSH and Pharmaceutical Sciences, 2020;4(12):470-477.

Source of support: Nil, Conflict of interest: None Declared

*Address for correspondence
Dr. Binod Kumar Singh
Ph.D Scholar,
PG Dept. of Kayachikitsa,
National Institute of Ayurveda,
Jaipur, India.
Email: drbinodbaghel@yahoo.com
Mobile: +91 8448207879

Disclaimer: IJRAPS is solely owned by Mahadev Publications - A non-profit publications, dedicated to publish quality research, while every effort has been taken to verify the accuracy of the content published in our Journal. IJRAPS cannot accept any responsibility or liability for the articles content which are published. The views expressed in articles by our contributing authors are not necessarily those of IJRAPS editor or editorial board members.