A CLINICAL STUDY ON EFFICACY OF SIYAKKAI (ACACIA CONCINNA) HAIR WASH ON DARUNAKA (PITIRIASIS CAPITIS)


INTRODUCTION:

Darunaka is a disease which is described under the Kshudra Roga in Ayurvedic texts. It occurs due to vitiation of Kapha and Vata Doshas. According to Ayurvedic signs and symptoms of Darunaka are, Daruna (cracked scalp), Kandura (itching of the scalp) and Ruksha (dryness of the scalp). Darunaka can be correlated with Pityriasis capitis. Aim: Sri Lankan use Siyakkai (Acacia concinna) hair wash as an effective home remedy for Pityriasis capitis. No known scientific study has been undertaken to evaluate the efficacy of SHW. Hence, the present study was undertaken. Methods: SHW was prepared by adding 10g of powdered pods of Acacia concinna to 240ml of boiled water. Seventy patients having Darunaka were selected and randomly divided into two groups, named as Groups A and B. Group A, consisting of thirty five patients, was treated with 240ml of SHW every alternative day, for twenty eight days. Group B, consisting of thirty five patients, was treated with placebo, in the same regimen. Response to treatment was recorded and therapeutic effects were evaluated through symptomatic relief. Results: Patients treated with SHW showed a significant symptomatic relief in scaling, itching, dryness and greasiness of scalp after treatment. Interval between scaling also became longer. Some patients treated with SHW complained of rhinorrhea. Conclusion: It is concluded that Darunaka (Pityriasis capitis) can be relieved with Siyakkai Hair Wash.

Key Words: Darunaka, Pityriasis capitis, Siyakkai, Acacia concinna, hair wash.

MATERIAL AND METHODS:

Study design: A randomized single blind, parallel, placebo controlled clinical study.

Selection of drug:
Sri Lankans use Siyakkai (Acacia concinna) hair wash as an effective home remedy to manage the disease Darunaka (Pityriasis capitis). Hence SHW was selected for this study.

Preparation of Siyakkai hair wash:
Pods of the A. concinna were brought from the market and cleaned. The pods were powdered and stored in an airtight container. To prepare the hair wash, 240ml of boiled water was added to 10g of powder of A. concinna, and allowed to cool.

ABSTRACT:

Background: Skin constantly renews itself. Dead cells fall off as new cells form beneath them. In Pityriasis capitis, this process is abnormally accelerated. Its signs and symptoms are: cells shedding in clearly visible flakes, small white or grey scales accumulating on the scalp, itching or dry or greasy hair. Darunaka is disease described in Ayurveda under Ksudra Roga. Signs and symptoms of Darunaka are: Daruna (cracked scalp), Kandura (itching of the scalp) and Ruksha (dryness of the scalp). Darunaka can be correlated with Pityriasis capitis. Aim: Sri Lankan use Siyakkai (Acacia concinna) hair wash as an effective home remedy for Pityriasis capitis. No known scientific study has been undertaken to evaluate the efficacy of SHW. Hence, the present study was undertaken. Methods: SHW was prepared by adding 10g of powdered pods of Acacia concinna to 240ml of boiled water. Seventy patients having Darunaka were selected and randomly divided into two groups, named as Groups A and B. Group A, consisting of thirty five patients, was treated with 240ml of SHW every alternative day, for twenty eight days. Group B, consisting of thirty five patients, was treated with placebo, in the same regimen. Response to treatment was recorded and therapeutic effects were evaluated through symptomatic relief. Results: Patients treated with SHW showed a significant symptomatic relief in scaling, itching, dryness and greasiness of scalp after treatment. Interval between scaling also became longer. Some patients treated with SHW complained of rhinorrhea. Conclusion: It is concluded that Darunaka (Pityriasis capitis) can be relieved with Siyakkai Hair Wash.

Key Words: Darunaka, Pityriasis capitis, Siyakkai, Acacia concinna, hair wash.

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to cool in the normal temperature.

**Preparation of placebo:**

Permitted brown food colouring was added to 240ml boiled and cooled water.

**Selection of patients**

**Sampling:** Randomization was done by using a random numbers table.

**Sample size:** 70 patients

**Study setting:**

The patients suffering from *Darunaka* (Pityriasis capitis), were selected from Ayurveda Teaching Hospital, Borella, Sri Lanka from July 2007 to September 2009

**Diagnostic criteria:**

Cracking and itching in the scalp, excessive flaking and abnormal shedding of the skin, and dryness or greasiness in the scalp are the diagnostic criteria of *Darunaka* (Pityriasis capitis).

**Inclusion criteria:**

The patients with *Darunaka* (Cracking of the scalp), *Kandu* (Itching of the scalp), *Ruksha* (Dryness of the scalp), Greasiness of hair, hair falling and scaling of the scalp were included in the present study.

**Exclusion Criteria:**

Patients suffering from psoriasis, allergic conditions of the scalp and nutritional disorders were excluded from the research. Some patients who are affected with dandruff suffer from self-esteem problems and seemed to be anxious or depressed due itching and/or large amounts of ungainly flaking. Such patients were also excluded from the study.

**Grouping**

In this study, the patients were randomly divided into two groups namely as Group A and Group B and each group consisting of thirty five patients.

These patients were instructed to take their normal diet and to avoid use of shampoo and soaps in hair washing during the treatment period.

After selection of patients, they were informed about the study and their written consent was obtained. Further, patients were made to understand that they are able to withdraw from the study any time without prior notice.

**Lab Investigation:**

Routine examination on blood (WBC/DC, Hb %) and urine Full report were done but no special laboratory investigation were carried out.

**Intervention**

**Group A**

**Drug:** Siyakkai Hair Wash

**Dose:** 240ml of *Siyakkai* hair wash was applied on the scalp and hair, kept for 20 minutes and rinse off with portable water.

**Duration:** Every alternative day, for 28 days

**Follow up:** One month

**Group B**

**Drug:** Placebo for *Siyakkai* Hair Wash

**Dose:** 240ml of placebo for *Siyakkai* Hair Wash was applied on the scalp and hair, kept for 20 minutes and rinse off with rectify water

**Duration:** Every alternative day, for 28 days

**Follow up:** One month

**Criteria for Assessment**

Responses to the treatment were evaluated by using a specially prepared grading scale for clinical features. Grading of the Signs and Symptoms of *Darunaka* (Pityriasis capitis) are given below.

**A) Darunaka** (Cracking of the scalp)

0 = No Cracking

1 = Cracking is limited to 5-10cm area

2 = Cracking is limited to 10-20cm area

3 = Cracking is limited to 20-30cm area

4 = Cracking can be seen all over the scalp

**B) Kandu** (Itching of the scalp)

0 = No Itching

1 = Occasionally feels Itching sensation

2 = Intermittently feels Itching sensation

3 = Often feels Itching sensation

4 = Always feels Itching sensation

**C) Ruksha** (Dryness of the scalp)

0 = No Dryness

1 = No Dryness in appearance but slight Dryness can be felt in the scalp

2 = Mild Dryness in the scalp that can be seen and felt

3 = Moderate dryness in the scalp that can be easily seen and felt

4 = Coarse dryness in the scalp that can prominently be seen and felt

**D) Scaling of the Scalp**

4a) **Grading according to Duration of recurrence of scaling**

0 = No Scaling from Scalp

1 = Scaling at four day intervals

2 = Scaling at three day intervals

3 = Scaling at two day intervals

4 = Scaling daily

4b) **Grading according to the scaled area of the scalp**

0 = No Scaling of the Scalp

1 = Scaled area limited to 5-10cm² of the scalp

2 = Scaled area limited to 10-15cm² of the scalp

3 = Scaled area limited to 15-20cm² of the scalp
4 = Scaled area is more than 20cm²

4c) Grading according to the size of the Scales

0 = No Scaling of the Scalp
1 = powder like scales are visible
2 =1 mm scales are visible
3 =1-2mm scales are visible
4 = Scales are larger than 2mm in size

E) Greasiness of Hair

0 = Normal hair
1 = Normal in appearance but feel slightly greasiness to touch.
2 = Mild greasiness that can be seen and felt
3 = Moderate greasiness that can be seen and felt
4 = Heavy greasiness making the hair excessively greasy to touch and in appearance

Statistical analysis:

Statistical analysis was done by using Mann–Whitney U test.

Table 1: Percentages of symptomatic relief during the treatment with Siyakkai Hair Wash and Placebo in Darunaka (Pityriasis capitis)

<table>
<thead>
<tr>
<th>SYMPTOMS</th>
<th>Placebo Group</th>
<th>Treated Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Completely relieved</td>
<td>Partially relieved</td>
</tr>
<tr>
<td>Daruna (cracking of the scalp)</td>
<td>00.00%</td>
<td>00.00%</td>
</tr>
<tr>
<td>Kandu (itching of the scalp)</td>
<td>5.00%</td>
<td>10.00%</td>
</tr>
<tr>
<td>Ruksha (dryness of the scalp)</td>
<td>10.00%</td>
<td>20.00%</td>
</tr>
<tr>
<td>Greasiness of the hair</td>
<td>00.00%</td>
<td>00.00%</td>
</tr>
</tbody>
</table>

Table 2: Symptomatic relief during the treatment with Siyakkai Hair Wash and Placebo in Darunaka (Pityriasis capitis).

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Placebo group (mean ± SE)</th>
<th>Treated group (mean ± SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before treatment</td>
<td>After treatment</td>
</tr>
<tr>
<td>Daruna (cracking of the scalp)</td>
<td>3.40 ± 0.16</td>
<td>3.40 ± 0.16</td>
</tr>
<tr>
<td>Kandu (itching of the scalp)</td>
<td>1.23 ± 0.21</td>
<td>1.14 ± 0.21</td>
</tr>
<tr>
<td>Ruksha (dryness of the scalp)</td>
<td>1.54 ± 0.18</td>
<td>1.29 ± 0.17</td>
</tr>
<tr>
<td>Greasiness</td>
<td>0.31 ± 0.15</td>
<td>0.31 ± 0.15</td>
</tr>
</tbody>
</table>

* p < 0.05 compare to control
DISCUSSION:
The patients treated with placebo did not show statistical significant symptomatic relief in scaling, itching of the scalp, dryness and greasiness of the scalp after the treatment.

The powder of A.concinna is slightly acidic and contains saponin which helps to cleanse the scalp without stripping of natural oils. Darunaka is a disease which occurs due to vitiation of Vata and Kapha Dosha. According to Ayurveda, A. concinna has the properties of Kashaya Rasa, Ruksa Guna and Katu Vipaka \(^6\). These properties of A.concinna pacifies vitiated Kapha Dosha. This plant also has the property of Guru Guna \(^6\) which pacifies vitiated Vata Dosha. A. concinna pacifies vitiated Vata and Kapha Dosha in the body. Pacification of Vata and Kapha Dosha in Darunaka would result in significant symptomatic relief in scaling, itching of the scalp, dryness and greasiness of the scalp after the treatment with Siyakkai Hair Wash.

Wuthi-uodomlert and Vallisuta\(^7\) reported that ethanolic and chloroform extract from Soxhlet extractor, and lyophilized extract and macerated ethanolic extracts of Acacia concinna possess average inhibitory zone diameter (IZD) compared to that of ketoconazole’s. From the averaged IZDs of all fungal isolates, the antifungal effectiveness of lyophilized, chloroform, ethanolic (Soxhlet) and ethanolic (macerated) extract was at 18.38, 18.34, 16.67 and 14.06 mm, respectively. Natarajan, V. and Natarajan, S.\(^8\) were recorded that ethanol, ethyl acetate and hexane extracts of pods of Acacia concinna possess significant antidermatophytic against the dermatophytes Trichophyton rubrum, Trichophyton mentagrophytes, Trichophyton violaceum, Microsporum nanum and Epidermophyton floccosum with the MIC value of 62.5µg/ ml. According to findings of Wuthi-uodomlert et al. and Natarajan et al., A. concinna has the properties to control Darunaka (Pityriasis capitis).

Some patients treated with Siyakkai Hair Wash complained about rhinorrhea. A.concinna has the property of Sheeta Veerya and this may cause rhinorrhea among some patients.

CONCLUSION:
It can be concluded that the Siyakkai Hair Wash completely or partially relieves the Darunaka (Pityriasis capitis), especially scaling, itching of the scalp, dryness and greasiness of the scalp.

REFERENCES:


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