



## A REVIEW ON VARIOUS STUDIES IN THE MANAGEMENT OF KIKKISHA

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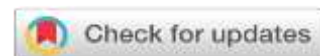
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### ABSTRACT

Pregnancy brings about many changes in women's life, from social, physical, and psychological to including cosmetic aspects. As beauty is one of the most important concerns of every woman, this is hampered by the appearance of *Kikkisa* or striae gravidarum. The skin changes and disfigurement of the skin is more so when *kikkisa* is associated with symptoms like itching, discoloration, dryness, etc. Striae gravidarum occurs in 90% women due to skin stretching and due to the effect of adrenocortical steroids, oestrogen, and Relaxing on skin elastic fibres. Hence, primarily from the cosmetic point of view and also clinically; treatment of these marks is a necessity. Many treatment modalities are available in Ayurvedic classics for the treatment of these and local treatment modalities are more convenient and long-acting modalities for the treatment of *kikkisa*. Probably for this reason *lepa kalpanas* and *Tailas* are extensively studied and widely used in the treatment of *kikkisa*. Two such *lepa Kalpana* and *Tailas* explained in *kikkisa chikitsa* are studied at our institution and a systematic review of these is attempted in this paper.

**Keywords:** Pregnancy, striae gravidarum, *Kikkisa*

### INTRODUCTION

For every woman, pregnancy is the most important & pleasurable phase of life, as this is the time she

evolves as a mother. This comes with several compromises that are inevitable to pregnancy like weight

gain, skin changes & what not. *Kikkisa* is one such physiological skin change of pregnancy. *Kikkisa* is a condition co-related with striae gravidarum. *Kikkisa* is a clinical skin manifestation occurring in 3rd trimester of pregnancy in about 90 % of women.<sup>[1]</sup> It is characterized by *kandumoola cha kikkisa* in *udra, athana*, and *uru pradhessa* associated with *pani-pada daha*, dryness, and discoloration of skin<sup>[2]</sup>. This condition is co-related with striae gravidarum presenting as stretch marks on the abdomen, thighs, and breasts associated with itching, burning sensation, dryness & discolouration<sup>[3]</sup>. Though not a disease, it does seek a lot of attention for the symptoms are very disturbing for women. Hence, treatment is a necessity.

In contemporary science, these manifestations are considered physiological, so they do not work on the treatment of the marks but only give soothing lotions and external applications for alleviating associated symptoms. Considering, the Ayurvedic perspective, this becomes a *tridoshaja vyadhi* caused by *Garbhot-padana*; which explains much vivid treatment plans

**Materials and Methods:**

mentioned in the classics for this manifestation. All the *acharyas* have explained external applications in various forms like *seka, mardana, lepa*, and *taila abhyanga*. *Lepa kalpanas* and *tailas* are safer and have better results on the symptoms due to their long-term exposure to the medicament and lesser complications. Few such studies with ayurvedic treatment modalities are studied in the Dept. of Prasuti Tantra and Stree Roga at SDM College of Ayurveda and are compiled for their results in the management of *kikkisa*.

1. A clinical study on the effect of *Chandana Ushira Kalka lepa* with *navaneeta* in *kikkisa*. By Dr. Chaitra -2005
2. A comparative study of *Karveera patra siddha taila* and *karanja patra siddha taila* on *kikkisa*. By Dr. Gayathri patil-2009
3. A clinical study to evaluate the effect of topical application of certain indigenous drugs in the management of *kikkisa*. By Dr. Dharitri purohit-2021

Sr. No.	Author	Title of thesis	Study type	Methodology	Results
1.	Dr. Chaitra	A clinical study on the effect of <i>Chandana Ushira Kalka lepa</i> with <i>navaneeta</i> in <i>kikkisa</i> .	Randomized clinical Trail	10 Primigravidae in their 3 <sup>rd</sup> trimester presenting with or without manifestation of <i>kikkisa</i> with a complaint of itching, discoloration, and dryness on the abdomen were randomly selected and given <i>Chandana</i> <sup>[4,5]</sup> <i>Ushira</i> <sup>[6,7]</sup> <i>kalka lepa</i> with <i>navaneeta</i> <sup>[8,9]</sup> for local application for a period of 1 month along with routine <i>garbhini paricharya</i> . A follow-up was done once every 15 days till delivery and the last follow-up was done 1 month after delivery.	<p><b>Effect on itching:</b> The mean score was 1.7 BT and reduced to 0.0 AT after 15 days of treatment and maintained throughout. The statistical values were found to be highly significant with P&lt;0.001.</p> <p><b>Effect on the texture of skin:</b> The effect on the texture of skin gave a mean score of 2.0 BT which reduced to 1.3 AT after 15 days and to 1.2 after delivery and 0.3 AF. The difference was statistically significant at P=0.045, 0.037 throughout treatment, and highly significant after following up at P= 0.001.</p> <p><b>Effect on dryness:</b> The mean score for dryness of skin was 0.500 BT which decreased to 0.00 after 15 days of treatment and maintained throughout. The analysed results gave statistically significant results at P= 0.015.</p> <p><b>Effect on discoloration:</b> The mean score for discoloration was 1.70 BT which reduced to 1.0 AT and further</p>

					reduced to 0.40 AF. The statistical results were highly significant at P=0.001 At and <0.001 AF.
2.	Dr. Gayathri patil	A comparative study of <i>Karaveera patra siddha taila</i> and <i>karanja patra siddha taila</i> on <i>kikkisa</i>	Single-blind comparative study	A minimum of 20 pregnant women in their 3 <sup>rd</sup> trimester presenting with the manifestation of <i>kikkisa</i> , were randomly selected from the OPD and IPD of SDM Ayurvedic Hospital, Kuthpady, Udupi. Pregnant women in their 3 <sup>rd</sup> trimester are included, with an age group of 18-35 years, were treated with <i>Karaveera</i> <sup>[10,11,12]</sup> <i>patra siddha taila</i> or <i>karanja</i> <sup>[13]</sup> <i>patra siddha taila</i> .	<p><b>The effect of <i>Karaveera patra siddha taila</i> and <i>karanja patra siddha taila</i> on itching</b> was: 81.25% and 84.21% respectively.</p> <p><b>The effect of <i>Karaveera patra siddha taila</i> and <i>karanja patra siddha taila</i> on burning sensation</b> was 81.25% and 78.57%.</p> <p><b>The effect of <i>Karaveera patra siddha taila</i> and <i>karanja patra siddha taila</i> on texture</b> was: 72.72 % and 71.42%.</p> <p><b>The effect of <i>Karaveera patra siddha taila</i> and <i>karanja patra siddha taila</i> on dryness</b> was 90 % and 78.57%</p> <p><b>The effect of <i>Karaveera patra siddha taila</i> and <i>karanja patra siddha taila</i> on discolouration</b> was 68.42 % and 44.77%</p> <p>Based on the results we can say that the effect of <i>Karanja</i> was seen to be more in case of symptom like itching, burning sensation, and texture. Whereas <i>Karaveera</i> reduces the symptoms like dryness and discolouration. But there is not a statistically significant difference between the two groups.</p>

3.	Dr. Dhriti purohit	A clinical study to evaluate the effect of topical application of certain indigenous drugs in the management of <i>kikkisa</i>	Randomized clinical Trail	30 pregnant women in the age group of 18-35yrs. who developed <i>kikkisa</i> were randomly taken for the study from OPD & IPD of SDM Ayurveda Hospital, Udupi at 28 weeks of gestation. The 30 selected women were assessed before, during & after treatment & follow-up was taken 1 month after completion of intervention & were given topical application of <i>Raktachandanadi churna</i> <sup>[14]</sup> mixed with <i>Lakshadi taila</i> <sup>[15,16,17]</sup> over the abdomen for a period of 2 months half an hour before bath.	<p><b>Effect on Texture of skin-</b> The results showed no significant change in the texture of the skin both after treatment (P-0.250) &amp; after follow-up (P-0.620). Even clinically only 4 patients noticed changes in the texture of their skin.</p> <p><b>Effect on Itching-</b> The test results showed the trial drug was highly significant in treating itching at P-0.000 in both AT &amp; AF.</p> <p><b>Effect on Burning sensation-</b> Very few patients presented with burning sensation but among them most were relieved from the complaint after treatment &amp; test results showed the drug was significantly effective in reducing burning sensation bot AT (P- 0.012) &amp; AF (P-0.003).</p> <p><b>Effect on Dryness-</b> Almost all the patients found significant relief from dryness post-treatment from the very beginning. Statistically, the drug was highly significant in reducing dryness after 1 month, AT &amp; AF at P-0.000.</p> <p><b>Effect on Discoloration-</b> Discoloration of skin was reduced with highly significant results in both AT (P-0.001) &amp; AF (P-0.000).</p>
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**Inclusion criteria:**

- Primi and multigravida in the third trimester
- Patients with linear marks on the lower abdomen, thighs, and breasts
- Patients complain of itching.

**Exclusion criteria:**

- Cholestasis of pregnancy
- Patients with pre-existing eczema, psoriasis

- Other skin changes of pregnancy
- Hydramnios, twin pregnancy, pregnancy with huge fibroids and cysts
- All systemic diseases like DM, HTN, TB, etc.

**Assessment criteria:** Scoring grades were assigned for each symptom to assess the severity on a scale of 0-3 where 0 denotes no symptom and 3 denotes highest intensity.

**Assessment parameter**

Subjective parameters	Itching
	Burning sensation
Objective parameters	Discoloration
	Dryness
	Skin texture

**Observations:**

On the overall observations from all 60 patients from the above-mentioned studies, we can withdraw these

observations, 31 patients (51%) were seen from the age group of 21-30 yrs. Among 60 patients 44 patients were from the Hindu religion(73%). 42 patients (70%) were Housewives. Among 60 patients, 25 pa-

tients (41%) presented with complaints of a burning sensation. 33 patients (55%) had complaints of dryness. 32 patients (53%) had complaints of itching. The discolouration was seen among 31 patients (51%).

## DISCUSSION

The studies had shown positive results in the management of *kikkisa* and its associated symptoms.

*Kikkisa* mentioned in our classics is a condition seen during the second half of the pregnancy affecting the abdomen, the thighs, and the breast producing *charma vidharana* with associated symptoms like *kandu*, *vidaha*, and *aruna* or *Krishna Vivarnata*. Striae gravidarum mentioned in the modern literature presents a pregnant woman with the same unsightly linear stretch marks, in the same location and states the same pathology occurring due to rapid distension. Thus, it is clear that this condition which is considered striae gravidarum currently, is the condition named *Kikkisa* in the ayurvedic classics. The secondary influence of cortisol in the manifestation of striae seems to be a new theory put forth now, they were probably taken care of better in the bygone days by *garbhini paricharya* followed from the initial months. This *paricharya* may possibly have an effect on the pituitary-adrenal axis.

Modern medicine seems to have no formulation as such, which has been proven to act directly on the striae to be called beneficial. If there are some used, then they are known to be harmful to use, during pregnancy or the effect when used in lactation. Other varieties like laser treatment have become very expensive. So, a combination of two drugs along with another drug which acts like a base for application having no adverse effect on pregnancy and foetus was taken for the study. The drugs were selected, mainly based on the reference given in our classics and depending on the probable action could give to cure or manage the requirements of the clinical findings seen in *kikkisa*.

### **Probable mode of action drug:**

#### **1. A clinical study on the effect of Chandana Ushira Kalka lepa with navaneeta in kikkisa.**

- *Tikta rasa* present in both the drugs (*Chandana* and *Ushira*) produces a *sodhana* effect by nature i.e., the property of it to do *kleda shodhana* probably adds to its quality of reducing itching that is *kandu prashamana*.
- The chemical composition of *Chandana* and *Ushira* is found to contain about 90% essential oils which are said to have a major amount of alcohol i.e. 95% and 60% alcohol respectively. This probably is the cause of the better effect as alcohol is said to penetrate the epidermis as they are soluble in lipoids. Also, 2% of ester present in *Chandana* having similar properties are possibly adding to its action.
- *Navaneeta* becomes a very useful remedy in reducing the *vikriti of vata and kapha*. It is known to be *ras vardhaka* as it is comprised of *madhura rasa, sheeta virya, and Singdha guna* which is useful in taking care of skin. It is also a *Swabhavika pathya* hence will increase the strength of the skin, making it more supple and healthy. It also forms a greasy film on the skin which reduces moisture loss from the skin and may improve hydration and dryness.

#### **2. A comparative study of Karveera patra siddha taila and karanja patra siddha taila on kikkisa**

##### **Karaveera patra siddha taila:**

- Itching: *Tikta rasa* and *katu vipaka* have *kandughna* property and also *Karaveera* is a *kandughna dravya*, hence itching is completely reduced.
- Burning sensation: *Tikta* and *kashaya rasa* have *dahasamaka* property, so burning is subsided.
- Discoloration: *Tikta rasa* and *katu vipaka* have *kushtaghna* properties and *kashaya rasa* has *varnya* properties, presence of all these factors in these drugs helped in preventing and curing discolouration.
- Striae: *Tikta rasa* has *sthiri karan* action and *kashaya rasa & katu vipaka* of *Karaveera* are having best *ropaka* property, so they help to reduce striae gravida.

##### **Karanja patra siddha taila:**

- Itching: *Tikta rasa* and *katu vipaka* have *kandughna* property that helps to reduce the *kandu*.
- Burning sensation: *Tikta* and *kashaya rasa* have *dahasamaka* property.
- Discoloration: *Tikta rasa* and *katu vipaka* have *kushtaghna* properties and *kashaya rasa* has



*varnya* properties, presence of all these factors in these drugs helped in prevent and curing discoloration.

- Striae: *Tikta rasa* has *sthiri karan* action, *kashaya rasa* & *katu vipak* are said to be the best *Ropak* properties so they helped to reduce striae gravidarum.
- 3. A clinical study to evaluate the effect of topical application of certain indigenous drugs in the management of kikkisa.**

All 4 ingredients selected in the indigenous drugs i.e., *Raktachandanadi churna* are *Charakokta Varnya or Kandughna Dasaimani*.

- *Raktachandana* being *tikta rasatmaka, arsa-pitta hara* & possess *vranahara* property. Its constituents like phenols, pterostilbene, etc. act as antioxidants, anti-inflammatory, and anti-microbial properties that help in healing *twak sphutana, and vrana ropana* & reduce the size of the marks.
- *Sariva* is included both in *varnya* & *kandughna gana*. It is *tikta rasatmaka tridoshahara dravya* & is widely used in all ranges of classical cosmetic products. It is proven for making skin even toned & reduce pigmentation; with constituents like hemidesmin, triterpines, etc. which render its anti-acne, antioxidant, anti-microbial & wound healing properties & help in reduce discoloration, bring back the normal colour & texture of the skin.
- *Haridra* containing curcumin, curcuminoids, etc. is the most widely accepted cosmetic ingredient for its anti-oxidative, immune-modulatory, cleansing, antiseptic, and wound-healing properties. It is mentioned in *kandughna* & *kushtaghna ganas* in *Charaka*. As it is *katu tikta rasatmaka, ushna virya dravya* which possesses *varnya, Twakdosha hara vrana ropana* & *kandughna* properties. These, help in reducing itching & healing of the epidermal layers of the skin,
- *Manjishta* is one of the *varnya, raktaprasadana, daha prashamana dravya* composed of *Manjistin, rubifoline*, etc, which possesses properties of anti-inflammatory, detoxifying, analgesic, anti-pyretic, anti-microbial. It helps to reduce the burning sensation & to normalize the skin tone & complexion with its natural *pitta shamaka, Jwarahara karma*.
- The ingredients of *Lakshadi taila* possess *varnya, kandughna* & *kushtaghna* properties. *Laksha* along with this is endowed with *bhagha-sandhana guna* which adds to the healing of broken collagen

bonds & normalizes the breaks formed in the epidermis to reduce the size of *kikkisa*.

- This *taila*, when used with *Raktachandanadi Churna* helps in the reduction of itching & dryness due to its *snigdha guna, madhura rasatmaka, vata hara dravyas* like *Yashtimadhu, Ashwagandha, Rasna*, etc. These are composed of potentially effective antidepressant, immunomodulatory, anti-inflammatory & anti-stress actions, which help in reducing dryness of the skin by reducing serotonin receptivity of skin & enhancing the proliferation of tissues & increase collagen synthesis. *Dravya* like *Chandana, Musta, and Raktachandana* possess *shita virya, saptasaram, jwara daha prashamana* properties & have potential antipyretic, antiseptic, diuretic, antiscorbutic, etc. properties which are effective in the management of burning sensation & wound healing. *Twacha, varna prasadana, and vranaropana* properties of *Haridra, Sariva, Tila, Laksha* & *Kushta* help in effectively reducing the discoloration & maintains the normal complexion of the skin.

## CONCLUSION

As per today's lifestyle and western dressing style, women are more conscious about their physique. Striae being a physiological change of pregnancy leaves permanent marks on a women's body. Now a days pregnant women approach clinicians for these complaints and also for cosmetic purposes. The above-mentioned formulations possess *tikta kashya rasa, katu vipaka, tridosha hara, varnya, daha prashmana, and Kandughana* properties which help in rejuvenating the skin & maintaining normal tone & texture of the skin. The drugs with potential antihistamines increase the proliferation & differentiation of keratinocytes thereby, maintaining the integrity of the tissues to prevent tissue breakdown & tearing. The drugs may show better relief if used before the striae appear.

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