

A REVIEW ON VARIOUS STUDIES IN THE MANAGEMENT OF *KIKKISA*

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Article Received on
14 October 2022,

Revised on 04 Nov. 2022,
Accepted on 25 Nov. 2022

DOI: 10.20959/wjpr202216-26388

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ABSTRACT

Pregnancy brings about many changes in women's life, from social, physical, psychological including cosmetic aspects. As beauty is one of the most important concerns of every woman, this is hampered with 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 effect of adrenocortical steroids, oestrogen and Relaxin on skin elastic fibres. Hence, primarily with cosmetic point of view and also clinically; treatment of these marks is a necessity. Many treatment modalities are

available in Ayurvedic classics for treatment of these and local treatment modalities are more convenient and long-acting modality for 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 the weight gain, the 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.^[1] It is characterized by *kandumoola cha kikkisa* in *udra, athana* and

uru pradhesha associated with *pani-pada daha*, dryness and discoloration of skin.^[2] This condition is co-related with striae gravidarum presenting as stretch marks on abdomen, thighs and breasts associated with itching, burning sensation, dryness & discolouration.^[3] Though not a disease, but it does seek a lot of attention for the symptoms are very disturbing for the women. Hence, treatment is a necessity.

In contemporary science, these manifestations are considered physiological so they do not work on treatment of the marks but only give soothing lotions and external applications for alleviating associated symptoms. Considering, Ayurvedic perspective, this becomes a *tridoshaja vyadhi* caused by *garbhotpeedana*; which explains much vivid treatment plans mentioned in 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 has better results on the symptoms due to its long-term exposure to the medicament and lesser complications.

Few such studies with ayurvedic treatment modalities are studied in Dept. of Prasuti Tantra and Stree Roga at SDM College of Ayurveda are compiled for their results in 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 sidha taila* and *karanja patra sidha taila* on *kikkisa*. By Dr. Gayathri patil-2009
3. A clinical study to evaluate the effect of topical application of certain indigenous drugs in management of *kikkisa*. By Dr. Dharitri purohit- 2021

MATERIALS AND METHODS

Sr. No.	Author	Tittle 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 rd trimester presenting with or without manifestation of <i>kikkisa</i> with complaint of itching, discoloration, dryness on abdomen were randomly selected and given <i>Chandana</i> ^[4,5]	Effect on itching: 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

				<p><i>ushira</i>^[6,7] <i>kalka lepa</i> with <i>navaneeta</i>^[8,9] for local application for a period of 1 month along with routine <i>garbhini paricharya</i>. Follow up was done once in every 15 days till delivery and last follow up was done 1 month after delivery.</p>	<p>highly significant with $P < 0.001$.</p> <p>Effect on texture of skin: The effect on 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 follow up at $P = 0.001$.</p> <p>Effect on dryness: 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>Effect on discoloration: The mean score for discoloration was 1.70 BT which reduced to 1.0 AT and further reduced to 0.40 AF. The statistical results were highly significant at $P = 0.001$ At and < 0.001 AF.</p>
2.	Dr. Gayathri patil	A comparative study of <i>karveera</i>	Single blind comparative study	Minimum of 20 pregnant women in their 3 rd trimester presenting with	The effect of <i>karaveera patra sidda taila</i> and <i>karanja patra</i>

		<p><i>patra siddha taila</i> and <i>karanja patra siddha taila</i> on <i>kikkisa</i></p>		<p>manifestation of <i>kikkisa</i>, were randomly selected from the OPD and IPD of SDM Ayurvedic Hospital, Kuthpady, Udupi. Pregnant women in their 3rd trimester are included, with an age group of 18-35 years, Were treated with <i>karaveera</i>^[10,11,12] <i>patra siddha taila</i> or <i>karanja</i>^[13] <i>patra siddha taila</i>.</p>	<p><i>siddha taila</i> on itching was: 81.25% and 84.21% respectively. The effect of <i>karaveera patra siddha taila</i> and <i>karanja patra siddha taila</i> on burning sensation was 81.25% and 78.57%. The effect of <i>karaveera patra siddha taila</i> and <i>karanja patra siddha taila</i> on texture was: 72.72 % and 71.42%. The effect of <i>karaveera patra siddha taila</i> and <i>karanja patra siddha taila</i> on dryness was 90 % and 78.57% The effect of <i>karaveera patra siddha taila</i> and <i>karanja patra siddha taila</i> on discolouration was 68.42 % and 44.77% Based on the results we can say that effect of <i>Karanja</i> was seen to be more in case of symptom like itching, burning sensation and texture. Whereas <i>Karaveera</i> reduce the symptoms like dryness and discolouration. But there is not a statistically</p>
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					significant difference between the two groups.
3.	Dr. Dharitri purohit	A clinical study to evaluate the effect of topical application of certain indigenous drugs in 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 in their 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> ^[14] mixed with <i>Lakshadi taila</i> ^[15,16,17] over the abdomen for a period of 2 months half an hour before bath.	<p>Effect on Texture of skin- The results showed no significant change in the texture of skin both after treatment (P-0.250) & after follow-up (P-0.620). even clinically only 4 patients noticed changes in texture of skin.</p> <p>Effect on Itching- The test results showed the trial drug was highly significant in treating itching at P-0.000 both AT & AF.</p> <p>Effect on Burning sensation- Very few patients presented with burning sensation but among them most were relieved from the complaint after treatment & test results showed drug was significantly effective in reducing burning sensation bot AT (P- 0.012) & AF (P-0.003).</p> <p>Effect on Dryness- Almost all the patients found significant relief from dryness post treatment from very beginning. Statistically the drug was highly</p>

					<p>significant in reducing dryness after 1 month, AT & AF at P-0.000.</p> <p>Effect on Discoloration-</p> <p>Discoloration of skin was reduced with highly significant results both AT (P-0.001) & AF (P-0.000).</p>
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Inclusion criteria

- Primi and multigravida in third trimester
- Patients with linear marks on lower abdomen, thighs and breasts
- Patients complaining 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 grade 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 above mentioned studies, we can withdraw these observations, 31 patients (51%) were seen from age group of 21-30 yrs. Among 60 patients 44 patients were from Hindu religion(73%). 42 patients (70%) were

Housewives. Among 60 patients, 25 patients (41%) presented with complaints of burning sensation. 33 patients (55%) had complaints of dryness. 32 patients (53%) had complaints of itching. Discolouration was seen among 31 patients (51%).

RESULTS AND DISCUSSION

The studies had shown positive result 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 vidarana* with associated symptoms like *kandu*, *vidaha* and *aruna* or *Krishna vivarnata*. Striae gravidarum mentioned in the modern literature presents in a pregnant women with the same unsightly linear stretch marks, in the same location and stating same pathology occurring due to rapid distension. Thus it is clear that this condition which is considered as striae gravidarum currently, is the condition named *Kikkisa* in the ayurvedic classics. Through the secondary influence of the cortisol in 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 lactation. Other varieties like laser treatment 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 *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* are found to contain about 90% essential oils which is said to have major amount of alcohol i.e. 95% and 60% of alcohol respectively. This probably is the cause of better effect as alcohol are 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 *rasavardhaka* as it is comprised of *madhura rasa*, *sheeta virya*, *singdha guna* which is useful in taking care of skin. It is also a *swabhavika pathya* hence will increase the strength of skin, making it more supple and healthy. It also forms a greasy film on the skin which reduces the moisture loss from the skin and may improve the hydration and dryness.

2. A comparative study of *karveera patra sidda taila* and *karanja patra sidda taila* on *kikkisa Karaveera patra sidda 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 *dahashamaka* property, so burning is subsided.
- Discoloration: *Tikta rasa* and *katu vipaka* have *kushtaghna* property and *kashaya rasa* has *varnya* property, presence of all these factors in these drugs helped in preventing and curing discolouration.
- Striae: *Tikta rasa* has *sthirikaran* action and *kashaya rasa* & *katu vipaka* of *Karaveera* are having best *ropaka* property, so they helps to reduce striae gravidarum.

Karanja patra sidda taila

- Itching: *Tikta rasa* and *katu vipaka* have *kandughna* property that helps to reduce the *kandu*.
- Burning sensation: *Tikta* and *kashaya rasa* have *dahashamaka* property.
- Discolouration: *Tikta rasa* and *katu vipaka* have *kushtaghna* property and *kashaya rasa* has *varnya* property, presence of all these factors in these drugs helped in prevent and curing discolouration.
- Striae: *Tikta rasa* has *sthirikaran* action, *kashaya rasa* & *katu vipak* are said to be 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 management of *kikkisa*

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

- *Raktachandana* being *tikta rasatmaka, asra-pitta hara* & possess *vrana-hara* property. Its constituents like phenols, pterostilbene etc. act as anti-oxidants, anti-inflammatory, anti-microbial properties that help in healing *twak sphutana, vrana ropana* & reduce the size of the marks.
- *Sariva* is included both in *varnya* & *kandughna gana*. It is *tikta rasatmaka tridosahara 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, triterpenes etc. which renders its anti-acne, anti-oxidant, anti-microbial & wound healing properties & help in reducing discoloration, bring back the normal colour & texture of skin.
- *Haridra* containing curcumin, curcuminoids etc. is most widely accepted cosmetic ingredient for its anti-oxidative, immune-modulatory, cleansing, antiseptic, wound healing property. 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.
- *Manjishtha* 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 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 *bhaghna-sandhana guna* which adds to the healing of broken collagen bonds & normalize the breaks formed in the epidermis to reduce the size of *kikkisa*.
- This *taila*, when used with *Raktachandanadi Churna* helps in 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 helps in reducing dryness of the skin by reducing serotonin receptivity of skin & enhancing

proliferation of tissues & increase collagen synthesis. *Dravya* like *Chandana*, *Musta*, *Raktachandana* possess *shita virya*, *asrapittahara*, *jwara daha prashamana* properties & have potential antipyretic, antiseptic, diuretic, antiscabatic etc. properties which are effective in management of burning sensation & wound healing. *Twachya*, *varna prasdana*, *vranaropana* properties of *Haridra*, *Sariva*, *Tila*, *Laksha* & *Kushta* helps 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 women's body. Now a days pregnant women approaches clinicians for these complaints and also for cosmetic purpose. The above mentioned formulations possesses *tikta kashya rasa*, *katu vipaka*, *tridosha hara*, *varnya*, *dahaprashmana*, *kandughana* properties which helps 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 appears.

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