



# A REVIEW ARTICLE ON KIKKISA WITH REFERENCE TO STRIAE GRAVIDARUM

<sup>1</sup> Dr. Pranali L. Gawade, <sup>2</sup> Dr. Laxmi M. Pattan, <sup>3</sup> Dr. Ramesh T. Konakeri

<sup>1</sup> First Year Post Graduate Scholar, Dept. of Prasuti Tantra evum Stri Roga, Dr. N. A. Magdum Ayurvedic College, Hospital and Research Centre, Ankali, Belgaum, Karnataka

<sup>2</sup> Associate Professor, Dept. of Prasuti Tantra evum Stri Roga, Dr. N. A. Magdum Ayurvedic College, Hospital and Research Centre, Ankali, Belgaum, Karnataka, <sup>3</sup> Principal, Dr. N. A. Magdum Ayurvedic College, Hospital and Research Centre, Ankali, Belgaum, Karnataka

<sup>1</sup> Department of Prasuti Tantra evum Stri Roga,

<sup>1</sup> Dr. N. A. Magdum Ayurvedic College, Hospital and Research Centre, Ankali, Belgaum, India

**Abstract:** During pregnancy a lot of anatomical, hormonal, and physiological changes occurs in the female body to accommodate and support the foetus throughout pregnancy. *Kikkisa* is a physiological condition which can be compared with striae gravidarum. It presents with symptoms of *Vidaha* (burning), *Vaivarnya* (discolouration of skin), *Kandu* (itching), *Charma Vidarana* (tearing of skin). Striae gravidarum affects more than 70-90% of total women population worldwide <sup>[1]</sup>. Striae gravidarum commonly occurs over the body particularly on the abdomen, groin and chest region. It can cause cosmetic and psychological impact on women and may struggle with body image issues and feel pressured to conform to societal beauty standards. In ayurveda our acharyas have mentioned different line of management like following of *Garbhini Paricharya* and *Lepa, Parisheka, Taila Abhyanga* and *Abhyantara Chikitsa*.

**Index Terms** - *Kikkisa, Striae gravidarum, Lepa, Parisheka, Taila Abhyanga Abhyantara Chikitsa*

## I. INTRODUCTION

*Kikkisa* is a clinical entity which occurs in *Saptama Maasa* <sup>[2]</sup> (seventh month) of pregnancy, characterized by *Daha, Kandu, Twak Bheda, Vaivrnya* due to vitiation of *Tridoshas*, hence can be considered as *Garbhini Vyadhi*. It is explained by different *Acharyas* in *Ayurveda*, and can be co-related with striae gravidarum of pregnancy, which occurs in late second trimester and early third trimester.

## PARIBHASHA

*Indu* has defined *Kikkisa* as *Rekha Swaroop Twaka Sankoch* <sup>[3]</sup> (formation of linear striae).

*Chakrapani* has defined *Kikkisa* as *CharmaVidaranam* <sup>[4]</sup> (tearing of skin that is separation of underlying connective tissue as the uterus enlarges within abdominal cavity causing stretching of skin on abdomen).

*Arunadatta* has defined *Kikkisa* as *Vishesha Rekha Aakar Vali* (linear striae) on *Uru* (chest), *Stana* (breast), *Udara* (abdomen) and it looks like *Shukairiv Purnata* (*Shuka Dhanya* (Barley) like elevated structure over skin) <sup>[5]</sup>.

## SAMPRAPTI

Women says, in seventh month of pregnancy *Keshotpatti* (formation of hair) of fetus causes burning sensation in mother which causes *Kikkisa*, but according to *Atreya* growing fetus (*Garbha*) enlarges *Garbhashaya* (*Garbhotpeedana* - pressure exerted by growing fetus) which displaces *Doshas Vata, Pitta* and *Kapha* upwards, reaches *Ura* (thorax- *Charaka*) <sup>[6]</sup> or *Hridaya* (Cardiac region- *Vagbhata*) <sup>[7]</sup> and produces *Daha* (burning sensation) causing *Kandu* (Itching) on abdomen, breasts and thighs.

## ROOPA

- *Kandu*
- *Daha*
- *Twak Bheda*
- *Rekha Swaroop Twak Sankoch*
- *Vaivarnyata*

## CHIKITSA <sup>[8]</sup>

### ABHYANTARA

1. Butter treated with the drugs of *Madhura* group should be given to pregnant woman frequently in the dose of *Panitala Matra* or else the butter medicated with decoction of stem bark of *Badari* and drugs of *Madhura* group should be given.

### BAHYA

#### 2.LEPA

Any one of the following should be rubbed over the abdomen:

1. *Lepa* of *Chandana* and *Mrunala* or *chandana* and *ushira*.
2. Powdered stem bark of *Sirisa*, flowers of *Dhataki*, *Sarsapa* and *Madhuyasti*.
3. Pestled bark of *Kutaja*, seeds of *Arjaka*, *Musta* and *Haridra*.
4. Pestled leaves of *Nimba*, *Badari* and *Surasa* with *Manjistha*.
5. *Triphala* pestled with the blood of *Prsata* or *Ena* deer and rabbit or only *Prsata* deer or else *Triphala* pestled with the blood of rabbit.

#### 3.PARISHEKA

1. Water medicated with *Punarnava*, flowers of *Malati* and *Madhuka* and mixed with blood of deer and rabbit.
2. Irrigation of abdomen and breasts should be done with decoction of *Patola*, *Nimba*, *Manjistha* and *Surasa*.
3. Repeated cleansing with decoction of *Daruharidra* and *Madhuka* should be done

#### 4.TAILA

Oil prepared with pestled leaves of *Karavira* alone or with *Karanja*.

#### 5.PATHYA

- 1.Diet should be sweet
- 2.Diet should be capable of suppressing *Vata*
- 3.Diet should be either salt and fat free or with little quantity of salt and fat
- 4.Light diet to be taken repeatedly in small amount followed by use of little quantity of water

#### STRIAE GRAVIDARUM

Striae gravidarum are slightly depressed linear marks with varying length and breadth found in pregnancy. They are predominantly found in the abdominal wall below the umbilicus, sometimes over thighs and breasts. These stretch marks represent the scar tissues in the deeper layer of the cutis <sup>[9]</sup>.

#### CAUSES <sup>[9]</sup>

- 1.mechanical stretching of the skin
- 2.increase in aldosterone production during pregnancy

#### RISK FACTOR <sup>[10]</sup>

- 1.younger age
- 2.maternal and family history
- 3.higher pre-pregnancy and pre-delivery weight
- 4.higher birth weight
- 5.Baseline body mass index
- 6.Age
- 7.Poor nutrition
- 8.Increased alcohol intake
- 9.Decreased water consumption
10. Decreased blood vitamin C levels

#### DISTRIBUTION

- 1.Abdomen
- 2.Thighs
- 3.Hips
- 4.Buttocks
- 5.Breasts

#### CLINICAL FEATURES

#### SYMPTOMPS

- 1.Burning
- 2.Itching

## SIGNS

Pink, red, discoloured, black, blue or purple streaks.

## PREVENTION

1. Controlled weight gain during pregnancy<sup>[11]</sup>
2. Massaging the abdominal wall by lubricants like olive oil maybe helpful in reducing their formation<sup>[11]</sup>
3. Creams that contain Centella asiatica extract, especially Trofolastin cream<sup>[12]</sup>
4. Alphastrin cream and verum cream, two proprietary creams that contain hyaluronic acid combined with various vitamins and fatty acids<sup>[12]</sup>

## MANAGEMENT<sup>[13]</sup>

Treatment should be instituted during the early stages of striae gravidarum rather than when striae have matured and permanent changes have occurred. Treatment targets are dermal collagen production, vascularity (in striae rubrae), wrinkling, and roughness of skin.

### • TOPICAL TREATMENT

1. Tretinoin cream and a combination of 20% glycolic acid + 10% ascorbic acid were shown to improve striae gravidarum.
2. Use of tretinoin 0.05% and 0.1% creams on a daily basis for 3 to 7 months consistently resulted in overall global improvement of striae gravidarum up to 47% and decreased in mean length and width up to 20% and 23% respectively of lesions.
3. Twenty percent glycolic acid combined with either 10% ascorbic acid or 0.05% tretinoin improved the appearance of striae gravidarum.

Tretinoin increased elastin content in the papillary and reticular dermis of the lesions but ascorbic acid and untreated areas did not show such improvement. Both treatments increased epidermal thickness and decreased papillary dermal thickness in striae gravidarum lesions.

### • LASER TREATMENT

1. A 1540-nm non-ablative fractional laser shows a significant clinical improvement in striae gravidarum that ranged from 1 to 24% and an observable difference at 3 months post-treatment.
2. For non-gestational SD, both fractional and non-fractional lasers have been employed with varying efficacies.
3. Histologic studies showed an increase in elastic fibers and collagen production. This laser was generally safe and treatments were well-tolerated by patients.
4. Ablative CO<sub>2</sub> lasers show improvements of 50 to 75%, especially in striae alba.
5. Pulsed dye laser results in textural improvements and is beneficial in striae rubra by reducing erythema.
6. Nd:YAG laser, also a vascular laser, demonstrated excellent improvement of up to 70% or more,

## • LIGHT TREATMENTS

1. Light therapy modalities such as intense pulsed light (IPL), ultraviolet (UV) light, and infrared light have been employed for the treatment of non-gestational SD.
2. IPL seems to result in at least moderate improvement of striae, but persistent erythema and post-inflammatory hyperpigmentation may complicate this treatment.
3. UV light, especially a combination of UV-B and UV-A, has been shown to consistently re-pigment striae alba. However, the results are not permanent and maintenance treatment is required.
4. Infrared light at 800 to 1800 nm can result in 25 to 50% improvement in striae alba after only four treatment sessions.

## DISCUSSION

Above mentioned drugs in the treatment of *Kikkisa* has the properties like *kandughna*, *Dahaprashaman*, *Varnya*, *Vranaropaka* which helps to reduce symptoms like itching, burning sensation. Symptoms of *Kikkisa* are different according to involvement of different vitiated *Doshas*, like the symptom *Kandu* is *Lakshana* of *kapha* but in *Kikkisa* *Kandu* occurs due to dryness of skin. So, *Vata Shamaka* property of oil, *Snigdha guna* of oil/butter, *Kandughna* action of *Tikta Rasa* gives relief from *Kandu*. *Sandhaniya Dravya* to correct *Charma Vidarana*, *Tikta Rasa Dravya* helps for *Vidaha Shaman* by correcting local vitiation of *Pitta*.

These *Ayurvedic* treatment modalities can help to prevent formation of *Kikkisa*, minimize its sign and symptoms, and promote the healing process of skin.

## CONCLUSION

In above study *Kikkisa* is correlated with striae gravidarum of pregnancy based upon its signs and symptoms. The treatment modalities of *Ayurveda* and modern science has been studied. These formulations or medicines can be used as therapeutic as well as prophylactic way to prevent the formation or progression of *Kikkisa*

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