

## AN EMPHASIS ON BAHIRPARIMARJANA CHIKITSA OF “KIKKISA (STRIAE GRAVI-DARUM/STRETCH MARKS)”

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### ABSTRACT

**Purpose:** -The purpose of the study is to highlight the uses and pharmacological actions (*karmas*) of *Ayurvedic* formulations in *kikkisa* (stretch marks) referred as “striae gravidarum” which occurs during pregnancy. Striae gravidarum represents the scar tissue in deeper layer of cutis found in the abdominal wall below the umbilicus, sometimes over the thighs and breasts, initially they are pinkish or purplish but after delivery they become glistening white and are called as “striae albicans”. It may show symptoms like itching, dryness and may result in emotional and psychological distress for many women, but unfortunately the cure is elusive. Many creams, laser treatments, cosmetic surgeries are getting advanced with day to day practice, but everyone needs best available and affordable treatments. Hence a detailed study on *Ayurvedic* formulations is highlighted for creating awareness on its usage. **Method:** In *Ayurveda* many formulations and drugs have been mentioned for local application, massage or rubbing when itching becomes irresistible in *kikkisa*.

**Keywords:** Pharmacological action, Karma, Ayurvedic formulations, *Kikkisa*, stretch marks, Striae gravidarum, striae albicans.

### INTRODUCTION

The quest for beauty is a journey which has been in existence almost since the existence of mankind itself. In every civilization known to us, the art of beautifying one-self has been of paramount importance especially for women.

Pregnancy is a beautiful blessed time for a woman, the only moment when a woman can feel the miracle of a new life with all her body. Along with all that magic, comes life's prose and physiology which can be rather difficult during and after pregnancy and one among them is *Kikkisa* (stretch marks /Striae gravidarum).

These are slightly depressed linear marks representing scar tissues in the deeper layer of cutis, predominantly found in the abdominal wall below the umbilicus, sometimes over the thighs and breasts. Found in the second trimester of pregnancy.

Initially they are pinkish and after delivery they become glistening white and are called as striae albicans<sup>1</sup>. It is often said that beauty lies skin deep, during pregnancy the skin undergoes changes due to hormones like aldosterone or by stretching of the skin, causing itching sometimes.

Some studies indicate that at least half of all pregnant women get stretch marks while other reports indicate the percentage may be closer to 75%. Thus, striae gravidarum is a common skin problem of considerable cosmetic concern and cause distress often leading to decrease in quality of life.

As a matter of cosmetic concern, every pregnant woman wants to restore pre-baby body and relief from symptoms like dryness, itching caused due to stretching of skin. To find an efficient treatment for the signs and symptoms, following *Ayurvedic* formulations have been studied in detail, which have already been proved to be efficient in many studies.

### Review of Literature

*Acharya Charaka* says, due to the growth of scalp hair of the foetus in seventh month, mother feels *vidaha* (burning sensation) resulting into development of *kikkisa*. *Atreya* has different opinion, he says the growing foetus displaces the *dosas* upwards thus, *vata*, *pitta* and *kapha* reaches *uras* or *hrdaya* and produces burning sensation, which causes itching. The disease *kikkisa* is the result of itching. *Chakrapani* says growth of hair cannot be the cause of *kikkisa*, it starts developing from third month itself. *Acharya Sushruta* has not explained *kikkisa* in the pregnancy disorder, but he has used the word *kikkisa* as a type of *raktaja krimi*<sup>2</sup>. In *Ashtanga sangraha vriddha vagbhata* has given same description as *charaka* but he used 'Hridraj' word in place of *uras*<sup>3</sup>. *Indu* says linear contractions of skin are *kikkisa*. *Arunadatta* has included burning sensation of palms and soles also as a symptom of *kikkisa*. Other commentators like *Harita*, *gangadhar*, *jaydevvidhyalankar* have described *kikkisa* in the pregnancy disorder. Seventh month onwards the uterus is enlarged due to growing foetus and produces stretching of abdominal skin, similarly development of various components of breasts cause stretching of skin. Due to this stretching linear lines appear over the skin of abdomen, breasts and thighs known as striae gravidarum/stretch marks. *Kikkisa* is description of this very condition.

### Materials and Methods-

*Ayurveda* has always given utmost importance to the care of the female in every phase of life. Local thera-

pies possess outstanding and satisfactory outcomes in the management of any abnormal conditions.

In *kikkisa* any one of the following should be locally applied or rubbed over abdomen and breasts –

*Bahir parimarjana chikitsa*<sup>4</sup>:-

1. *Chandana evum mrunala* or kalka of *chandana evum usira*
2. Powdered stem bark of *sirisa*, flowers of *dhataki*, *sarsapa* and *yastimadhu*.
3. Pestle bark of *kutaja*, seeds of *arjaka*, *musta* and *haridra*.
4. pestle leaves of *nimba*, *badara*, *surasa* and *manjistha*.
5. oil prepared with pestle leaves of *karavira* alone or with *karanja*
6. Irrigation of abdomen and breasts should be done with decoction of either *patola*, *nimba*, *manjistha surasa*<sup>5</sup> or leaves and flowers of *malati* and *madhuka* or else repeated cleansing with decoction of *daruharidra* and *madhuka* should be done.

### 1) Chandana (Santalum Album) :-

Is an aromatic substance which is utilized for external application as mentioned in the *vedic* literature.

It is used in skin diseases, *Varnya* in action-used in *varna vikaras* (skin discolourations), *Twak dosha hara* (detoxifies skin), *Daha shamaka* (reduces burning sensation) Sandal wood oil contains  $\alpha$  and  $\beta$ - Santalol<sup>6</sup>,  $\alpha$  santalol was found to be an inhibitor of tyrosinase which potentially acts to reduce abnormal pigmentation, Album oil has an efficacy of wound healing by promoting keratinocyte proliferation.

### 2) Mrunala (Nelumbo nucifera):-

*Mrunala* is a Sanskrit word referring to the *kamala nala* (Stalk of the lotus flower). The stem is useful in improving skin conditions, *varnya* in action (Improves skin complexion), and a great source of vitamin C and antioxidants. Acts as a moisturizing agent, helps in increasing skin elasticity and provides instant hydration to the skin and prevents the skin from getting dry and flaky.

### 3) Usira (Vetiveria zizanoids):-

It is *Varnya* (improves skin complexion), does *vrana ropana* (wound healing) and *daha shamaka* (reduces burning sensation). Vetiver oil plays a major role in

tightening and firming the skin and it is loaded with antioxidants. It has potential to treat melanogenesis, used for scar removal because it has ability to lighten the scars, and heal wounds by replacing the damaged skin cells with new healthy cells, chemical constituent like Khusimol is used in cosmetic applications. It nourishes and hydrates dry and irritated skin, reduces the scar marks, stretch marks and uneven tone<sup>7</sup>.

**4) Shirisha (Albizia lebeck):-**

It is *varnya* (improves skin complexion), *Kandugna* (reduces itching), *Twak dosha hara* (Detoxifies skin). It has chemical constituents like flavonoids, antioxidants, triterpenes which favour wound healing and reduce edema.

**5) Dhataki (Woodfordia fruticosa):-**

It has actions like *vrana ropana* (wound healing), used in *twak vikaras* (skin Disorders), chemical constituents like vitamin c, carotene and antioxidants help for boosting collagen production, helps to reduce the scar marks, and cure the discolouration, it also has proteins which helps to maintain the firmness and elasticity of the skin<sup>8</sup>.

**6) Sarshapa (Brassica campestris):-**

It is useful for *abhyanga* (massage) in *twakrogas* (skin diseases) as it is having *snigdha guna* reduces the dryness and is *kandughna* (reduces itching). *Sarshapa* contains a variety of phytochemical compounds including phenolics, flavonoids, carotene, antioxidants, alkaloids and tannins which are used to tighten the skin without making it dry.

**7) Yastimadhu (Glycyrrhiza glabra):-**

It is used in *Twak rogas* (skin diseases), *vrana* (wounds), *kandu* (itching) and is *sandhaniya dravya* (helps for joining). It is anti-inflammatory and has antioxidants, chemical constituents Like glycerine which is emollient, makes skin moist and smooth by filling in tiny cracks helping in healing and protecting the skin. Asparagine creates collagen, fibrinogen, elastin, connective tissue that keeps skin smooth, strong and firm without scars. Liquorice acid which lightens the darkened area, helps to lighten the skin after delivery also used in melasma in pregnancy. It speeds up the process by blocking melanin production and even out the skin tone of scar marks and contains anti- inflam-

matory properties that reduce swelling, reduces itching and hydrates the skin by keeping it firm<sup>9</sup>.

**8) Kutaja (Holarrhena antidysenterica):-**

It is used in *twak rogas* (skin diseases) and for *vrana ropana* (wound healing). It has got alkaloids like Holarricine, Aspartic acid, kurchine, which helps for wound healing.

**9) Arjaka (Ocimum Americanum)<sup>10</sup>:-**

*Arjaka* is a variety of *tulsi* and all the varieties of *tulsi* are, *vata* and *kapha hara* which helps in reducing dryness of skin and symptoms like itching. Chemical constituents like terpenoids has antioxidants and acts as skin permeation enhancer.

**10) Musta (Cyperus rotundus):-**

It is used in *twak rogas* (skin diseases) and is *kanduhara* (reduces itching), chemical constituents like glycerine and linolenic acid strengthens the skin forming protective barrier, moisturizes and heals the skin.

**11) Haridra (Curcuma longa):-**

It is *varnya* (improves skin complexion), *kandugna* (effective on Itching) and used in *Vrana* (wounds), *Twak rogas* (skin diseases) *Daha shamaka* (reduces burning sensation). chemical constituents like curcuminoids are anti-inflammatory and helps in wound healing, curcumin induces apoptosis in damaged cells and has potency to reduce scar marks, fatty acids help in skin hydration providing nutrients to the skin, phytoosterols improve scar appearance<sup>11</sup>

**12) Nimba (Azadirachta indica):-**

It is used in *kandu* (Itching), *vrana* (wounds), and in *twak rogas* (skin disorders). Chemical constituents like Azadirachtol, nimbidin, fatty acids and other compounds including antioxidants benefit the skin conditions. It has an extract which is boosted levels of collagen producing enzyme called as procollagen and a protein called elastin which retains skin shape and has the ability to heal the scars.

**13) Badara (Ziziphus jujuba):-**

It basically tones all the *dhatu*s, it has vitamin C, stearic acid which keeps the skin hydrated by preventing moisture loss. Rutin helps to supply oxygen and nutrients to skin cells, minimize uneven skin tone and production of new cells, Zeatin which helps for proper

distribution of amino acids and antioxidants heals wounds and prevents cell damage.

**14) Surasa (Ocimum sanctum):-**

Surasa is a classical name for Tulsi which is widely used in skin diseases, which is anti-inflammatory and has antioxidants. It has ascorbic acid, carotene, stearic acid and linoleic acid which maintains the skin elasticity, moisturizes the skin and removes the discolouration.  $\beta$  Sitosterol helps for reducing the scratch wounds

**15) Manjishta (Rubia cordifolia):-**

It is varnya (improves skin complexion), in vrana (wounds). Chemical constituents like manjistin, purpurin are used to treat skin diseases, clear the skin and even out skin pigmentation.<sup>12</sup>

**16) Karavira (Nerium indicum):-**

It is used for vrana shodhana (detoxification of wounds) and ropana (healing of wounds), Kandugna (reduces itching). Chemical constituents like plumericin is anti-inflammatory and Salicylic acid works to improve appearance of stretch marks.

**17) Karanja (Pongamia pinnata):-**

It is useful in twak rogas (skin diseases), vrana ropana (wound healing) and kandu (Itching). chemical constituents like karanjin and pongapin are anti-inflammatory and promotes wound healing.

**18) Patola (Tricosanthes dioica):-** It helps for vrana ropana (wound healing), and reduces kandu (itching). It has vitamin c and Nicotinic acid which helps to improve surface structure of skin and pigmentation disorders

**19) Malati (Jasminum officinale):-**

It is the classical name of Jati which is used in Twak rogas (skin diseases), vrana (wounds), Kandu (itching). Chemical constituents like jasmone evens the skin tone, moisturizes the skin and can eliminate

stretch marks and scars, Nerolidol is a skin penetration enhancer and antioxidant. Geraniol is anti-inflammatory, promotes regeneration of new skin cells and ideal ingredient for scar marks<sup>13</sup>.

**20) Madhuka (Madhuka indica):-**

Used in Twak rogas (skin conditions), It has folic acid which provides increased hydration, and alleviates skin dryness and Myricetin which is antioxidant agent.

**21) Daruharidra (Berberis aristata):-**

It is useful in Twak rogas (Skin conditions), Vrana ropana (Wound healing), Vrana shodhana (Detoxify the wound) and is varnya (Improves skin complexion). It has Berberine which helps in treating scar marks and discolouration. Daruharidra has numerous antioxidants.

**22) Varuna (Crataeva religiosa)<sup>14</sup>:-**

It is vata and kapha hara hence helps to reduce dryness and itching, chemical constituents like Rutin helps to supply oxygen and nutrients to skin cells, minimize uneven skin tone and production of new cells, stearic acid and linoleic acid maintains the skin elasticity, moisturizes the skin and removes the discolouration.  $\beta$  Sitosterol helps for reducing the scratch wounds.

Paste of varuna leaves has been indicated for anointing, before anointing, the suprapubic area is rubbed with dried cow dung. As dried cow dung is a great scrubbing agent to get rid of dead skin and it improves blood circulation.

The pastes should be prepared fresh and applied topically, can be self-administrated, Rubbing should be mild enough. In Ayurveda more preference is given for prevention. Prevention is better than cure. Maintaining healthy life style during pregnancy is very much essential.

**Pathya-Apathya**

	Pathya	Apathya
Aharaja	Madhura, vatahara ahara	Ushna, teekshna mithya ahara
Viharaja	Alpa vyayama	Divaswapna, one should not scratch inspite of urge of itching to avoid skin disfigurement

**Some of the essential micronutrients that need to be a regular part of the diet: -**

Zinc, copper, protein, vitamin A, B, C and E.

## DISCUSSION

*Kikkisa* (Striae gravidarum /Stretch marks) is a common skin disfiguring skin disorder of cosmetic concern. In *Ayurveda* many drugs and their combinations have been indicated for topical use in *kikkisa*. It has signs and symptoms like scar marks, discolouration, dryness, Itching and burning sensation sometimes. The above-mentioned drugs can be better utilized as they possess properties like *kandughna*, *vidaha shamaka*, *varnya*, *vraha ropaka* etc. *Vata shamaka dravyas* helps to reduce the itching caused due to dryness, Drugs having *tikta* and *kashayarasa* helps for *vidaha shamana* (reduces the burning sensation) *Kashaya rasa* of the *dravyas* is *varnya* and *sandhaniya* (helps for joining) in action. Hence *Ayurvedic* formulations with above mentioned properties should be formulated, tried and tested for efficient treatment of *kikkisa* in both preventive and curative aspect.

## CONCLUSION

Rising instances of stretch marks in people of various age groups is a boon for safe and effective treatment. Stretch marks unlike other scars may fade and may also become less noticeable, when its colour matches the unscarred skin around it. Everyone's physical make up is different. The above said drugs should be subjected for practical evaluation and those which are already proved to be efficient should be brought in use as a standard treatment. Easy availability and cost effectiveness of the above said formulations should be made for effective treatment of *kikkisa*.

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