



RESEARCH ARTICLE

“A CLINICAL STUDY ON EFFECT OF CHANDANADI SHATADHAUT GHRITA IN THE MANAGEMENT OF KIKKISA W.S.R. TO STRAIE GRAVIDARUM”

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Manuscript Info

Manuscript History

Received: 26 December 2022

Final Accepted: 30 January 2023

Published: February 2023

Key words:-

Kikkisa, Straie Gravidarum, Chandanadi Satadhauta Ghrita

Abstract

Twak is a link between internal and external environment and is also the seat of complexion, which maintains beauty and personal identity in the society. About more than 90% of total woman populations are affected by stretch marks on the body particularly on the abdomen, groin and on the chest region during and after pregnancy, which remains rest of life. Kikkisa is a type of skin ailment that occurs during pregnancy and mentioned in the disorders of pregnancy by the various Acharyas. An attempt is made to evaluate clinical efficacy of Chandanadi Shatadhaut Ghrita in 30 patients of Kikkisa. Though Kandu is a symptom of Kapha but here in Kikkis Kandu is due to dryness of skin. So Kandughna action of Tikta Rasa and Snehana effect of Snigdha Guna protect and give relief from Kandu. Tikta Rasa and Katu Vipaka have Kandughna property that helps to reduce Kandu and also Chandana and Karanaj area Kandughna drugs. Tikta and Kashaya Rasa have Daha Shamak property whereas chandan and ushira also have Pittashamak property, which reduce the Vidaha. Tikta Rasa and Katu Vipaka have Kushthaghna property and ushira and chandan have Varnya action. Kandu, Vidaha and Vaivarnyata were reduced markedly after the treatment of Kikkisa with chandanadi shatadhaut ghrita. There was no effect was seen of the chandanadi shatadhaut ghrita on reduction of the area of Kikkisa lesion. No any untoward effect was noticed during follow up study.

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Introduction:-

Twak is a most important enveloping protective layer and also a sense organ. It is a link between internal and

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external environment and is also the seat of complexion, which maintains beauty and personal identity in the society. About more than 90% of total woman populations are affected by stretch marks on the body particularly on the abdomen, groin and on the chest region during and after pregnancy, which remains rest of life¹. When she thinks over these things, the luster of her face goes down. So, it is very much necessary to work on this ailment called Kikkisa in Ayurveda. This condition occurs during the pregnancy period especially on 7th month of pregnancy or 2nd trimester of pregnancy. Striae gravidarum are linear lesions that frequently appear during pregnancy and are commonly found on the abdomen and breasts². It is a physiological change found in the second trimester of pregnancy particularly in the seven months due to the overstretching. It makes much psychological distress to the women. It is a very major problem in the modern cosmetic conscious era. This affects the females during that period in which they are supposed to be very beautiful. This develops inferiority complex in women as they are much conscious about their looks. According to Acharya Sushruta, the development of skin follows the fertilization of shukra and shonita. In foetal stage of development of the Garbha, layers of the skin are formed and this formation is caused by the three doshas and particularly by pitta. The phenomenon of formation of skin and its layers are just similar to the formation of layers on the upper or outer surface of boiled milk. Just as the Santanika forms in layers and gradually increase in thickness, all the layers formed in the developmental stage of the fully developed foetus.

KIKKISA

Kikkisa is a type of skin ailment that occurs during pregnancy and mentioned in the disorders of pregnancy by the various Acharyas. Acharya Charka, Both Vagbhatta, Harita, Bhela and their commentator like Chakrapani, Gangadhar, Indu, Arundatta and Jaydev Vidhyalankar have described kikkisa in the pregnancy disorder. Acharya Sushruta has not given the description of kikkisa in the relation of pregnancy. But he used word “Kikkisa” for one type of Raktaj krimi out of seven types.

According to Charak Samhita:

The women say that due to growth of scalp hair of the fetus in seventh month the mother gets vidaha, resulting into development of Kikkisa. However, Acharya Atreya says no, it is not so, the growing fetus displaces the dosas upwards, thus these vata, pitta and kapha reaching Uras and produce vidah which causes itching. The disease Kikkisa is the result of this itching.³ According to the chakrapani that at the third month, all the organs of the body develop simultaneously so growth of hairs also starts developing from third month itself. That's why growth of the hair cannot be the cause of itching.

Gangadhar told same as Chakrapani that Kikkisa means tear of the skin. Hindi commentator Jayadev Vidhyalankar gives two reasons for why growth of the hair cannot be the cause of itching.

1. Development of hairs starts from the third month. If hair is reason of vidah then vidah should be present in third month.
2. There is not any direct relation between foetus hair & uterine wall because foetus is covered by amniotic sac which is filled by amniotic fluid.

According to Astanga Sangraha:

In Ashtanga Sangraha Vridhdha Vagbhatta give same description like Charaka. But he used ‘Hridaj’ word in place of ‘Uras’.⁴ Comentrator Indu says that linear contertions of the skin are Kikkisa.

According to Astanga Hridaya:

Due to pressure of developing foetus, the doshas reach to the Hridaya and produce kandu and vidaha, which develop Kikkisa.⁵

Arundatta gives detail description about the disease. He says that normally in the hip region, breasts region and in abdominal region wrinkle or crease type markings (Valivishesa), like the linear lining marking at that time, which is called Kikkisa.

In many women have paddy like longspacetructures (shukakriti purnata), It is said Kikkisa. Burning sensation in Palm and sole are told as vidah.

According to Bhela Samhita:

In the seventh month due to the pressure of the growing foetus vata, pitta and kapha dosas are vitiated and go upward to the Ura and there producing burning sensation and itching. That is known as Kikkisa.⁶

Accorging to Harita Samhita:

Harita has not describe Kikkisa, but he has enlisted eight disorders of pregnancy and includes vivarnata in it which is a symptom of Kikkisa.

Table No. 1:- Signs & Symptoms of Kikkisa.

Sign/Symptoms	Charak	A.S	A.H	Bhela	Harita	Chakradata	Indu	Arun
Kandu	+	+	+	+	-	+	+	+
Vidah udar	+	+	+	+	-	+	+	+
Ura	+	+	+	+	-	+	+	+
Panipad	-	-	-	-	-	-	-	+
Twakbheda	+	+	-	-	-	+	+	+
Rsts udara	-	-	-	-	-	+	+	+
Uru	-	-	-	-	-	+	+	+
Stana	-	-	-	-	-	+	+	+
Shukakriti	-	-	-	-	-	-	-	+
Vaivarnyata	-	-	-	-	+	-	-	+
Varupyata	+	+	-	-	-	+	+	+
Valivisha udara	-	-	-	-	-	-	-	+
Uru	-	-	-	-	-	-	-	+
Stana	-	-	-	-	-	-	-	+

Treatment

Treatment of Kikkisa is given only in Charak Samhita, Astang Sangraha, Astang Hridaya and Bhela Samhita.

- Butter treated with the drugs of madhuragana should be given to pregnant women frequently in the dose of Panitala matra. With the anupan of kolodak (Sushka Badar phala kwath)^{7, 8}
- The butter medicated with decoction of dry fruit of Badar and drugs of madhuragana should be given.⁹
- Any one of the following rubbed over the abdomen and breasts.
 - i. The paste of Chandan and Mrinala^{10, 11}
 - ii. Chandan and Usira¹²
 - iii. Powder of sirisa stembark, flowers of Dhataki, Sarsapa and Madhuyasti^{13, 14}
 - iv. Pesteled bark of kutaja, seeds of Arjaka (Tulsi), Musta and Hridra^{15, 16}
 - v. Pesteled leaves of Nimba, Kola, Surasa and manjistha^{17, 18}
 - vi. Triphala pestled with the blood of prisata or ena deer and rabbit^{19, 20, 21}
 - vii. Oil prepared with pestled leaves of karvir^{22, 23}
 - viii. Oil prepared with pestled leaves of karanj²⁴
- Irrigation of abdomen and breasts should be done by any one of the following –
 - i. Water medicated with Punarnava, Flowers of Malati and Madhuka^{25, 26}
 - ii. Decoction of Patol, Nimba, Manjistha and Surasha²⁷
 - iii. Decoction of Daruharidha and Madhuka²⁸
- If the itching becomes irresistible then above-mentioned powders should be rubbed or an ointment.²⁹
- Bath should be taken with chandana, which will suppress itching sensation due to its coolness.³⁰

Striae Gravidarum

Developing stretch marks often comes with the territory of being pregnant. Between 90.95% women will develop striae gravidarum on their breasts, abdomen, buttocks or thighs during and after pregnancy. Striae gravidarum generally develops in the last 3 months (after 28 weeks). Although they can also appear suddenly, right at the end of pregnancy. Striae gravidarum slightly depressed linear marks with varying length and breadth found in pregnancy. They are predominantly found in the abdominal wall below the umbilicus and sometimes over the thighs and breasts due to weakening of elastic tissues, associated with pregnancy, overweight, rapid growth during puberty and adolescence, Cushing syndrome and tropical or prolonged treatment with corticosteroids. These are also known as striae atrophy and commonly known as **Stretch Marks**. Striae gravidarum represent the scar tissues in the deeper layer of the Cutis. Initially, these are pinkish but after the delivery obliterate the capillaries and they become glistening white in appearance and are called striae albicans. Thus, in multipara women both pinkish white striae are visible.

Material And Methods:-

Objective of the study

- 1 To evaluate clinical efficacy of Chandanadi Shatadhaut Ghrita in Kikkisa.
- 2 To study the complications if any.

Source of data:

30 pregnant women in their 2nd and 3rd trimester of pregnancy fulfilling the criteria will be selected from OPD and IPD of Prasuti Tantra and Stri Roga, Major S.D.Singh P G Ayurvedic College and Hospital, Farrukhabad.

Methods of collection of data:

Patients who are fulfilling the diagnostic and inclusion criteria were selected for the study.

Diagnostic Criteria

Diagnosis was made on the basis of following symptoms of Kikkisa occurring in a pregnant woman.

- 1 Kandu
- 2 Rukshta
- 3 Vaivarnyata
- 4 Sushkata

Inclusive Criteria

- 1 Patient with symptom of Kikkisa in abdomen.
- 2 2 and 3 trimester of pregnancy
- 3 Age group 20 to 35
- 4 Exclusive Criteria
- 5 Skin diseases due to other cause.
- 6 Hydramnios and twin pregnancy.
- 7 Pregnancy with huge fibroid or ovarian cyst.
- 8 Systemic diseases like Diabetes mellitus hyper tension, Tuberculosis. Etc

Duration of treatment:

2 months, twice a day.

Assessment Criteria:

Assessment will be analyzed on the basis of following subjective parameter and objective parameter before and after treatment. Statistical analysis was done by using Student test.

Assessment will be done based on subjective and objective criteria before and after the treatment.

Subjective Criteria

- 1 Itching (Kandu) (Mild/Moderate/Severe)
- 2 Burning (Vidah) (Mild/Moderate/Severe)
- 3 Discoloration (Vaivarnta)

Objective Criteria

- 1 Width of the lesion.
- 2 Length of the lesion.
- 3 Area of lesion
- 4 Relief the sign and symptoms according to Proforma.
- 5 Photograph of the involved skin were taken before and after treatment as per need of the study.

Scoring Pattern:

Subjective Criteria

Kandu (itching)

- 1 No itching : 0
- 2 Mild itching not disturbing normal activity : 1
- 3 Occasional itching distribution normal activity :2

4 Itching persistent continuously and disturbing sleep : 3

Vidaha (burning):

- 1 No burning sensation :0
- 2 Mild burning not disturbing normal activity :1
- 3 Occasion burning disturbing normal activity :2
- 4 Burning present continuous disturbing sleep :3

Discolouration (vaivarnata)

- 1 Normal :0
- 2 Mild :1
- 3 Moderate: 2
- 4 Severe: 3

Objective Criteria [BT /AT]

Width of lesion –
Length of lesion Area of lesion

Relief of sign and symptom according to proforma

Result:-

Total 31 patients were registered in this study, out of which 30 patients had completed their course of treatment and 1 patient left against medical advice. All the patients were assessed before and after the treatment

Age:

Age wise distribution showed that most of the patient belonging to age group of 26-29 years i.e. 30% while 26.7% patients were from the age group of 22-25 years because of reproductive age and most fertile period should mentioned here.

Religion:

In the present study, maximum numbers of patients were Hindu i.e. 96.7% with the present strength of the sample it may be difficult to judge the role of classification with the small sample size.

Marital Status:

All the patients were married women because Kikkisa can occur only in the pregnancy period.

Education:

31.81% patients were reported to be educated upto primary level. It would be irrelevant to correlate this finding with any aspect of disease.

Socio Economic Status:

Maximum number of patients i.e 39.06% T.N. were from poor class. Even then no relation can be fixed with disease Kikkis in the economic status however good health and Garbhini paricharya is required for the pregnant women.

Occupation:

80 % patients from the clinical trial were noted as house wives. Thus, data also indicates the predominance of housewife among general population.

Menstrual Status:

The menstrual status showed that age of menarche and nature of past menstrual cycle was within normal limits in maximum number of patients.

Ahara:

Maximum patients. i.e. 70 % were taken mixed Ahara. Only 30 % were vegetarian.

Nidra:

Maximum numbers of patients i.e. 51.56% were found disturbed sleep. Because Kikkis is developed after second trimester and movement of foetus found after first trimester and slowly increase which was the reason for disturbing sleep.

Mutra Pravritti:

Maximum number of patients showed regular Mutra Pravritti i.e. 93.3%.

Mala Pravritti:

The maximum number of patients showed regular Mala Pravritti i.e. 93.3% Mala Pravritti is also the reflection of Sara Kitta Vibhajana Karma and Prakrita Apana Vayu.

Prakriti:

It was observed that the maximum numbers of patients having Vata pitta Prakriti. Kikkisa is developed by Tridosha mainly Vata Pitta. So, we could not come to the definite conclusion on the Prakriti level.

Samhanan:

Distribution of patients according to Samhanana highlighted that maximum number of patients were having Madhyama Samhanana i.e. 86.3% Samhanan is the constitution of body.

Satva:

86.7% of patients were having Madhyama Satva. Satva means Mana and it controls the body.

Satmya:

Maximum numbers of patients i.e. 86.7 % were having from Madhyam

Praman:

Maximum number of patients i.e. 82.81% were having from Madhyama Paraman. There is no relation of Paraman with the Kikkis disease.

Subjectives criterias:**Comparison of Kandu BT & AT****Table No.2:-** Comparison of Kandu BT & AT.

Variable	Ranks	N	Mean	SD	Z	P	Inference
Kandu BT– Kandu AT	Negative ranks	28a	1.8	0.404	4.8822a	0.001	S
	Positive ranks	0b	0.17	0.531			
	Ties	2c					
	Total	30					

Among a total of 30 patients with complaints of kikkisa, 28 patients got relief from itching sensation after trial and in 2 patients the symptom of itching remained unchanged. No patients reported with aggravation of symptom after treatment. When result were compared before treatment and after treatment for variable Kandu with Wilcoxon signed ranked test, significant result were obtained with Z=4.882, P=0.001.

Comparison of Vidaha BT and AT**Table No. 3:-** Comparison of Vidaha BT & AT.

Variable	Ranks	N	Mean	SD	Z	P	Inference
Kandu BT– Kandu AT	Negative ranks	26	1.57	0.626	4.660	0.001	S
	Positive ranks	0	0.1	0.403			
	Ties	4					
	Total	30					

Among a total of 30 patients with complaints of Kikkisa, 26 patients got relief from vidaha after trial and in 4 patients the symptom of vidaha remain unchanged. No patients reported with aggravation of symptom after treatment. When result were compared before treatment and after treatment for variable Vidaha with Wilcoxon

signed ranked test, significant result were obtained with $Z=4.660$, $P=0.001$.

Comparison of Vaivarnyata BT & AT

Table No.4:- Comparison of Vaivarnyata BT & AT.

Variable	Ranks	N	Mean	SD	Z	P	Inference
Kandu BT– Kandu AT	Negative ranks	18a	1.27	0.583	-3.994a	0.001	S
	Positive ranks	0b	0.50	0.572			
	Ties	12c					
	Total	30					

Among a total of 30 patients with complaints of kikkisa, 18 patients got relief from vaivarnayata sensation after trial and in 12 patients the symptom of vaivarnayata remained unchanged. In patients reported with aggravation of symptom after treatment. When results were compared before treatment and after treatment for variable Vaivarnyata with Wilcoxon signed ranked test, significant result were obtained with $Z=3.994$, $P=0.001$.

Objective criteria:

Comparison of the lesion BT and AT:

Table No. 5:- Comparison of the width of the lesion BT & AT.

Criteria	Mean		Difference in Mean	Paired 't' Test				
	BT	AT		% Relief	S.D.	S.E.M	't'	Sig
width of lesion bt - width of lesion at	6.27	5.9	4.0	3.689	.87691	.16010	1.874	0.071
		6.67	1					

When results were compared before treatment and after treatment for variable width of lesion with Student paired 't' test, non-significant result were obtained with $t=1.874$, $P=0.071$.

Table No.6:- Comparison of the length of the lesion BT & AT.

Criteria	Mean		Difference in Mean	Paired 't' Test			
	BT	AT		S.D.	S.E.M	't'	Sig
width of lesion bt - width of lesion at	6.2	6	.23	.23333	.14920	1.564	.129
	3.33						

When result were compared before treatment and after treatment for variable length of lesion with Student paired 't' test, non-significant result were obtained with $t=1.564$, $P=0.129$.

Table No. 7:- Comparison of the area of the lesion BT & AT.

Criteria	Mean		Difference in Mean	Paired 't' Test				
	BT	AT		% Relief	S.D.	S.E.M	't'	Sig
area of lesion bt - width of lesion at					3.76667	1.86170	2.023	0.052

When result were compared before treatment and after treatment for variable area of lesion with Student paired 't' test, non-significant result were obtained with $t=2.023$, $P=0.052$.

Probable Mode of Action of Drugs:

Kandu:

Though Kandu is a symptom of Kapha but here in Kikkis Kandu is due to dryness of skin. So Kandughna action of Tikta Rasa and Snehana effect of Snigdha Guna protect and give relief from Kandu. Tikta Rasa and Katu Vipaka have Kandughna property that helps to reduce Kandu and also Chandana and Karanj area Kandughna drugs.

Vidaha:

Tikta and Kashaya Rasa have Daha Shamak property whereas chandan and ushira also have Pittashamak property, which reduce the Vidah.

Vairupyata:

Tikta Rasa and Katu Vipaka have Kushthaghna property and ushira and chandan have Varnya action.

Modern Point of View:

After a wound has occurred to the skin, both skin cells and connective tissue cells (fibroblasts) begin multiplying to repair the damage. The fibroblasts form a framework upon which the skin cells can migrate into and fill in the wound. It is the balance between the rates of replication of fibroblasts versus skin cells that is important here. If the fibroblasts replicate too quickly, they can form a dense network that is not as easily penetrated by the skin cells keep up with the fibroblasts then little scar tissue is formed and the skin has a more normal appearance after the wound has healed. The Chandanadi Shatadhaut Ghrita application routine is design to remove the dead skin layer by layer.

Conclusion:-

Conclusions are the extracts squeezed out from the whole work after scrutinizing the study regarding Kikkisa i.e. Striae gravidarum and its Management following conclusions can be drawn:

1. Kikkisa develops in 7th month of pregnancy and is described in the classics by Acharya Charaka, both Vagbhata and Acharya Bhela.
2. In this particular study Kikkisa is correlated with Striae gravidarum on the basis of similarity of signs and symptoms.
3. The symptomatology of the Kikkisa resembles with the Tridosha mainly Kapha Pitta.
4. Striae gravidarum affects the dermis and breaks the elastic fibers and collagen fibers due to growing of the fetus in the 2nd trimester. Skin stretches out forming different colours of striae gravidarum.
5. More than 90% of women population are having Striae gravidarum during pregnancy.
6. Chandanadi drugs are having Varnya, Rakta shodhan, Kandughna and Kusthaghna properties and also have antibacterial, antifungal, anticarcinogenic properties.
7. The following points could be concluded after this study:
 - a. For the subjective parameters significant results were obtained, but for the objective parameters no significant result found.
 - b. Kandu, Vidaha and Vaivarnyata were reduced markedly after the treatment of Kikkisa with chandanadi shatadhaut ghrita.
 - c. There was no effect was seen of the chandanadi shatadhaut ghrita on reduction of the area of Kikkisa lesion.
 - d. No any untoward effect was noticed during follow up study.

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