

To Study the Efficacy of Kampillakadi Tail as- Vranaropak In Sadyovrana

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Abstract:- Wounds are perhaps inescapable events in the life and at times they are dangerous and even life threatening wounds may be produced as a result of physical, chemical, thermal, radiant, microbial or immunological insult to the tissue. Wounds occurring as a result of accidental injury most of the available treatment modalities are topical application of medicaments mainly aimed at preventing infections. There is always a need for better agent; which can enhance healing, control infection, expenses associated with allopathic drugs and reconstruction of those injuries without compressive original beauty of that structure / organ and avoidance of hyper granulation. Keloid, scar formation etc. to overcome this problem, the proposed topic has been chosen. The efforts have been made to see the efficiency, safety toxicity, if any of Ayurvedic preparation Kampillakadi Taila in Sadyovrana.

KEYWORDS: Kampillakadi Tail, Vranaropak, Sadyovrana

I. INTRODUCTION

The repair of the tissue is most significant entity on which revolves the whole branch of surgery. The very fact that this subject is being studied from the days of sushrut till date; indicate its magnitude to a surgeon and physician; many times healing of the wound is more troublesome than any other phenomenon.

Sushrut implies – “Vaikritapaham” (su.su. 17/18-19) measures which bring back the normal colour surface and even hairs. (su. Chi 1/88-102) thus sushrut also be called as person who invented “Plastic Surgery”.

The research study is focused on four principles of molecular and cellular events in wound healing

- i) Inflammatory cell infiltration and coetaneous immune function
- ii) Keratinocyte activation and migration
- iii) Endothelial cell function (during angiogenesis)
- iv) Fibroblast activation leading to scar formation

AIMS & OBJECTIVES:

The project has been undertaken with the following aims and objectives

- 1) Practical study of sadyovrana i.e. Ghrushta vrana on patients
- 2) To observed the role of Kampillakadi Tail as vranaropak in Ghrushta vrana

II. MATERIALS AND METHODS

Design of clinical study:

Type of study: Prospective open random comparative study.

Consent: Inform written consent of patients included in study was taken as the language best understood by them.

Drug: Kampillakadi Taila (Exp. GP) compare with Jatyadi Taila. (Std GP)

Route of Application: Local

Time of Application : Three times in day

Dose: As per wound surface

Purvakarman : Shodhana of wound

Pradhana Karma: Local application over wound

Pachchata Karma: Dressing as per wound

Total no. of patient: 60

Selection of patient: Randomly selected with the fulfillment of all the subjective criteria

Duration of study: 28 days

Follow up: 3 days, 1st week, 2nd week, 3rd week, 4th week; any adverse effects were meticulously recorded during the study.

Groups	Patients	Drugs	form	Route	Duration
A Experimental	30	Kampillakadi Taila	Oil	Ext. Application (Local)	28 Days
B Standard	30	Jatyadi Taila	Oil	Ext. Application (Local)	28 Days

INCLUSION CRITERIA:

- 1) Patients were selected from the age groups of 15-50 years irrespective of sex; religion and accusation. etc
- 2) Patients having classical features of Ghrushtra vrana as ref in su. Chi – 2/22

EXCLUSION CRITERIA:

- I) Chhinna vrana (Excised wound)
- Bhinna vrana (Stab wound)
- Viddha vrana (Punctured wound)
- Khata vrana (Lassetred wound)
- Picchit vrana (Crushed wound)
- Burns (Electrical wound)
- i) Patients suffering from diabetes, leprosy, syphilis, Tubercular malignant wound, osteomyelitis, varicose veins (su. Su. 23/7)
- ii) Dushta vranas
- iii) Traumatic wounds with severe complications like fracture, dislocation, severe hemorrhage

STANDARDIZATION OF DRUG:

The standardizations of trial drug Kampillakadi Taila was done in reputed pharmaceutical (ISO 9001-2001 certified) laboratory.

Quantity submitted: App 100 ml.

Sample Name: Kampillakadi Taila

Date of Manufacturing: March 2008

No.	Description	Test	Result
1	Reddish brown color oil with characteristic odour filled in a plastic bottle weight per ML	gm/ml	
2	Refractive index at 40 deg. C		0.9151
3	Viscosity	MPS	1.4648
4	Iodine value	gl/100 gm	41.10
5	Simplification value	mgKOH/gm	118.8
6	Acid Value	mgKOH/gm	198
7	Peroxide value	meg/1000 gm	4.51
8	Loss of drying at 110 Deg C.	of W/W	0
9	Total Bacterial count	cfu/gm	0.11
10	Yeast and mould	cfu/gm	0
11	Microbial test for pathogens		0
12	Pseudomonas E coli staphalococcus Ayurvedas		Absent

Preparation of Kampillakadi Taila

- a) Til Taila Murchana
- b) Preparation of Kampillakadi Taila

a) Til Taila Murchana

Ingredients :

- 1) Til Taila - 5 Lit
- 2) Manjishta - 312 gm
- 3) Haritaka - 78 gm

4) Nalika	- 78 gm
5) Haridra	- 78 gm
6) Lodhra	- 78 gm
7) Nagarmotha	- 78 gm
8) Ketakipushpa	- 78 gm
9) Vatashruna	- 78 gm
10) Sugandabala	- 78 gm
11) Triphala	- 78 gm

Procedure:

- 1) Til Taila is taken in a brass vessel heated in a mild fire and allowed for self cooling
- 2) The kalka drugs are mixed with water and paste is prepared. This kalka is added to the above oil constant – stemming is carried.
- 3) Equal quantity of water is added to the above vessel
- 4) It is kept over mandagni fire & slowly stirred to mix well
- 5) After 7 hrs. heating; it is called for self cooling and is covered with plate to prevent any dust fall
- 6) On the next day, heating is again continued & 2 ½ hrs. heating is carried on this day
- 7) On the 3rd day, the heating process is continued till the oil becomes water free and attains the taila siddha Lakshanas
- 8) After observing all qualities of snehasiddhi, the vessel is taken out from the stove and the oil is filtered through a clean cloth
- 9) Obtained murchita Tila Taila is prepared in glass jar

Observation:

- 1) Colour changes dark reddish
- 2) Smell typical of Manjishta

B) Preparation of Kampillakadi Taila

The Kampillakadi Taila was prepared according to tailpak vidhi described in sharangdhar samhita. The murchit tila taila was used for preparation of Kampillakadi Taila

Materials:

Drug	Quantity in GM
1) Kampillak	- 70 gm
2) Vidang	- 70 gm
3) Vatsak	- 70 gm
4) Bala	- 70 gm
5) Patol	- 70 gm
6) Pichumarda	- 70 gm
7) Lodhra	- 70 gm
8) Musta	- 70 gm
9) Priyangu	- 70 gm
10) Khadir	- 70 gm
11) Dhatki	- 70 gm
12) Sarja	- 70 gm
13) Ela	- 70 gm
14) Aaru	- 70 gm
15) Chandan	- 70 gm
16) Triphala	- 70 gm
17) Tila Taila	- 70 gm
18) Water	- 70 gm

Procedure:

- 1) Preparation of kalka:
Kampillakadi Taila was prepared as per quantity of drugs & water mentioned in the text (ref. Charak chi 25/91); (A: S. Uttartantra 30/74-75)
Whenever quantity of drug as is not mentioned then it has to be taken as four times sneha & 16 times water that of kalka drugs
- 2) The above mentioned prepared kalka is added to the murchita tila taila and prescribed amount of water was added to the vessel
- 3) Heating is continued in mild flame (fire) over gas stove
- 4) Constant stemming is carried to avoid sticking of the kalka drugs
- 5) On the first day, heating is continued for 4 hrs. later it is all used for self cooling & mouth is closed with a plate
- 6) Next day, heating is continued till the completion of mruda paka i.e. till the attainment of Pakasiddhi lakshanas
- 7) Later, it is taken out from the stove, it is filtered through a clean cloth
- 8) The oil so obtained is Kampillakadi Taila was preserved in jar made up for store
- 9) It was poured in 100 ml plastic bottles

Taila Pariksha:

- 1) Phenodgama
- 2) Varitartva kalker
- 3) Agni Pariksha – To ensure complete evaporate of water
- 4) Colour – Dark reddish brown
- 5) Smell – Sweet
- 6) Sparsh – Snighdha
- 7) Quantity – 4.2 lit

Jatyadi Taila (std. group)

The already pack & prepared 50 ml bottle of Jatyad Jaila of vaidyanath Company is taken for application of Ghrushta vrana for 30 pts.

Epilogue

Healing is a natural process and the entire healer drug only increase this natural process more and less; depending upon formulation; Kampillakadi Taila is an attempt in this field and which by virtue of its rasa, virya, vipaka. Kampillakadi Taila produces an ideal mean to shorten the time of healing this is topical healing.

Investigations:

CBC, ESR

BSL - ®

Vrana Karma:

- 1) Vrana Shodhan:
The Ghrushta vrana is usually contemned so every wound was cleaned with distilled water in both the groups.
- 2) Application of oil:
After the irrigation Kampillakadi Taila was applied over wound with sterile gauze & the wound was covered with bandage. In case of dry wound, the taila was applied thrice a day & the wound was left uncovered. The same procedure was applied with Jatyadi in group B. (std. GP)
- 3) Follow up:
All patients were informed to visit the one-on-one after the period of 3 days & then weekly upto 4 weeks. Even if the wound get heals in a week or two. Patients were requested to see the doctor; on the advised day. This was done to evaluate the past heling study of the wound.
- 4) Period of observation or Evaluation:

The wounds were observed frequently up to 28 days. The reliefs in term of symptoms, slams were recorded each time.

B) Assessment of Healing Wound:

% of Relief in clinical features	Effect
≤ 75%	Cured
5 – 75%	markedly improved
25 – 50%	improved
< 25%	not improved

* Method of measured surface area of Abstract wound:

For this, trace paper & graph paper were used. The edges were marked by putting tace paper over wound. The area marked was then measured with the help of graph paper. The same as then measured in mm² (more than ½ mm sy. Was counted as 1 mm. sq.& less than ½ mm sy. Was counted as 0)

* Statistical Analysis:-

Result were analyzed

- 1) Wilcoxon sign Rank Test
- 2) Wilcoxon Rank sum for subjective criteria and
- 3) Paired test (t)
- 4) Unpaired test (t) for objective criteria

P < 0.05 was considered as statistically significant P (0.05) was consider as more significant P < 0.0001 was considered as highly significant.

* Observation and result:

It was observed that highest healing time average 17 days which was in the care of Kampillakadi Taila group houses wound of standard group that was Jatyadi Taila group had taken more than 21 days

Groups	Healing in average days
Kampillakadi Taila	17 days
Jatyadi Taila	21 days

Effect of Therapy in surface area

Sr. No.	Follow Up	% Relief		Mean ± sign		+ Value	
		Exp GP	Cont. GP	Exp GP	Cont. GP	Exp GP	Cont. GP
1	3 Days	42.61	44.11	206 ± 153	249 ± 147	7.3727	9.2528
2	1 st Week	78.67	80.12	380 ± 205	452 ± 195	10.115	92.66
3	2 nd Week	96.37	94.6	465 ± 267	534 ± 242	9.5553	12.07
4	3 rd Week	99.44	98.39	480 ± 274	555 ± 276	9.594	12.87
5	4 th Week	99.94	99.66	483 ± 276	562 ± 255	9.5545	12.05

P value if Paired "t"		
Sr. No	Exp. GP	Cont GP
1	3 days 0,0	0.0
2	1st Week 0,0	0.0
3	2nd Week 0,0	0.0
4	3rd Week 0,0	0.0
5	4th Week 0,0	0.0

Compare between both GPs
by unpair & "t" test
(P value) P< 0.10
P<0.10
P<0.10
P<0.10
P<0.10

Overall Results of Therapy:

Result in 28 days	Experimental as		Standard as	
	Patients	%	Patients	%
1 Cured	28	93.33	25	83.37
2 Markedly improved	1	3.33	4	13.33
3 improved	1	3.33	1	3.33
4 unchanged	0	0	0	0

It was observed that maximum if 93.33 cured cases were cared in experimental group that was Kampillakadi Taila followed by 83.33% in std. GP that was Jatyadi Taila. 3.33% of markedly improved cases were observed cases were observed in Kampillakadi Taila group & 13.33% in Jatyadi Taila 3.33% improved cases were observed in both groups.

III. DISCUSSION

Discussion in drug review

a) Mode of action of drug

Pharmacodynamic peripherals of Kampillakadi Taila

Sr. No.	Ingredients	Rasa	Guna	Virya	Vipaka
1	Kampillakadi 16 drugs	kashaya	laghu Ruksha	sheet	katu
2	Til Taila	madhur kashaya Tikta	Guru Snighdha	Ushna	katu

Doshakarma

Kaphaghna

Vata Kaphagna

Karmukta of Kampillakadi Taila

Sr. No.	Ingredients	Karmukta
1)	Kampillakadi 16 Days	
2)	Til Taila (su. Su. 45/112, 46/523,525)	Sukshma, Vishad, Vikash, Shodhi,

Lipophilic actions of tila taila, easily facilitate transportation to a target organ & find delivery inside the cell; because cell membrane also contains lipid. The lipophilic nature of oil facilitates entry of formulation into the cell.

Kampillakadi 16 Days contains tannin, volatile oils, kshar steroid, wax, phytosteril, mycine, protein, carbohydrates, minerals, Vit A, Vit C, CA, Inn, starch, albumin, cellular acts as a wound healer and antiseptic also; Kampillakadi contains antioxidant clinical which enhanced the rapid wound healing.

Discussion on Result:

a) Effect in Healing time

It was observed that, highest healing time average 17 days was in the case of Kampillakadi Tail group.

However wound of std grp i.e. Jatyadi Taila GP was taken more than 21 days

b) Overall result of therapy in Jatyadi Taila GP: 83.33% of R_x cases were carried followed by 13.33% of cases were improved & one case 03.33% were improved

c) Overall result of therapy in Kampillakadi Taila GP: 93.33% cured result was observed in all cases, followed by 1% of cases were markedly improved & improved in each.

IV. CONCLUSION

From the study it can be speculated that, the drug Kampillakadi taila possesses efficiency for "vranaropana" without having any adverse effect. The drug prepared showed better result in clinical studies carried and it produced healthier granulation tissues and increased the rapid healing time.

Kampillakadi taila is equally effective that of Jatyadi taila and works on all cardinal signs & symptoms of wound. The result of Kampillakadi taila was drawn from small sample size (30 patients). IT had been tried in a large sample size it would definitely have shown significant result. This study seeks further more research to see whether the Kampillakadi taila effective in the neutral of infected wound.

Kampillakadi taila (Exp. GP)

Surface area of Vrana (mm²)

Sr. No.	B.T.	3D	1st WK	2nd WK	3rd WK	4th WK
1	438	438 / SBF	0 / SBD	0	0	0
2	354	354 / SBF	0 / SBD	0	0	0
3	422	205	84	16	0	0
4	103	51	21	5	0	0
5	566	256	105	28	2	0
6	333	154	62	14	0	0
7	108	45	18	4	0	0
8	706	358	146	30	6	0
9	104	50	20	5	0	0
10	206	102	42	9	0	0
11	100	45	15	0	0	0
12	915	461	189	45	13	0
13	1226	614	252	54	16	08
14	306	256	60	10	0	0
15	218	100	40	7	0	0
16	608	307	126	27	9	0
17	400	400 / SBF	0 / SBD	0	0	0
18	300	250	55	8	0	0
19	200	104	44	5	0	0
20	500	256	105	28	3	0
21	803	410	166	35	7	0
22	701	354	140	25	4	0
23	403	201	85	18	0	0
24	656	333	736	29	6	0
25	1003	806 / SBF	605 / SBF	0 / SBD	0	0
26	904	450	180	34	5	0
27	508	256	105	29	4	0
28	207	95	38	7	0	0
29	404	209	88	20	0	0
30	805	401	165	33	5	0

Note: Measurement of surface trace of Ghrushta vrana from crash paper with help of trace paper
Counting of square of graph paper as follows:

- 1) Greater than ½ of 1 mm square – counting as 1 whole square
- 2) Less than ½ of mm square counting as no square

SBF: Scab formed

SBD: Scab detached

Jatyadi taila (Std. GP)

Surface area of Vrana (mm²)

Sr. No.	B.T.	3D	1st WK	2nd WK	3rd WK	4th WK
1	324	324 / SBF	0 / SBD	0	0	0
2	1234	632	273	70	34	19
3	1008	512	210	63	20	13
4	724	363	141	47	15	0
5	608	307	126	30	10	0
6	772	400	171	54	17	0
7	100	45	18	6	0	0
8	506	273	129	41	10	0
9	1124	655	270	65	25	12
10	709	370	145	41	15	0
11	415	215 / SBF	0 / SBD	0	0	0
12	633	371	164	30	11	0
13	503	403 / SBF	53	0	0	0
14	251	133	181	23	0	0
15	222	111	90	11	0	0
16	814	423	100	43	15	0
17	408	210	0 / SBD	20	0	0
18	406	215	0 / SBD	38	5	0
19	226	213 / SBF	87	0	0	0
20	300	256 / SBF	63	0	0	0
21	354	208	150	24	0	0
22	318	260	115	13	0	0
23	700	370	175	46	7	0
24	556	307	130	32	14	0
25	818	415	164	45	21	0
26	603	317	61	42	15	0
27	757	390	110	15	13	0
28	201	110	203	25	0	0
29	456	256	137	55	5	0
30	904	460	0 / SBD	0	20	0

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