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Research Article

EXPERIMENTAL STUDY TO EVALUATE THE EFFICACY OF *VISHADAN TAIL* IN DINITROFLUOROBENZENE INDUCED ECZEMA IN ALBINO MICE WITH REFERENCE TO *DUSHIVISHJANYA VICHARCHIKA*

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ABSTRACT

Vicharchika, a type of *Kshudra Kushtha* described in Ayurveda, closely resembles eczema in modern dermatology. It is a chronic inflammatory skin condition often triggered by impaired digestion and toxin accumulation (*Ama*), which may be linked to *Dushivisha*-subtle environmental and dietary toxins described in Ayurvedic texts. The present experimental study evaluates the efficacy of *Vishadan Tail*, a classical Ayurvedic formulation cited in *Gadanigraha,* for treating *Dushivishjanya Vicharchika* (eczema) using a DNFB-induced eczema model in Swiss albino mice. Mice were divided into four groups: normal control, disease control, standard (Betamethasone-treated), and *Vishadan Tail*-treated. The formulation, rich in herbs with *Kusthaghna, Vishaghna,* and *Kandughna* properties, was applied topically for 7 days. Macroscopic skin assessments and histopathological evaluations were performed. Results demonstrated a significant reduction in erythema, odema, and scaling in the *Vishadan Tail* group compared to the disease control group ($p<0.001$) with outcomes comparable to the standard treatment. Histopathology further confirmed reduced inflammation and cellular infiltration. The study concludes that *Vishadan Tail* exhibits promising therapeutic potential in the management of eczema, supporting its traditional claims and suggesting its possible use as a safe herbal alternative in dermatological care.

INTRODUCTION

In today's era of urbanization more pesticides and fertilizers are used to yield more production of food thus synthetic fertilizers diminish nutritional value of food also loaded with residue form of other chemicals serval medication, preservatives colouring agents, additives enter into our body in several ways in low quantity or low potency they are termed as *Dushivish*. Consumptions of *Virudh ahar* for long time develops *Ama* and *Guna* of *Ama* and *Vish* are similar. A windy and cloudy day, rainy season (*Kaal*), *Anupdesha (Desh)* extremely cold rainy places, *Kulattha* sesame (*Anna*), stress full life and *Diwaswap* etc. These factors vitiate the dhatus and give rise to toxic condition referred to as *Dushivish.* [1]

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"दूषितदेशकालन्नदिवास्वप्नैर्भिकष्ण स्मात्दुषयेदातुनतस्मात्दूषिविषम्स्मृतम॥" (सु. क. २/३३)

In Ayurveda, majority of skin disease are mentioned under the *Kustha*. It can be listed as Ayurveda dermatology in Ayurveda[2] and all skin disorder have been classified mainly two groups *Mahakustha* and *Kshudrakustha* among them *Vicharchika* is include under *Kshudra kustha* and in *Ayurveda* eczema can resemble with *Vicharchika*. Eczema or dermatitis is skin disorder resulting from unhealthy diet and lifestyle choices these cause impairment of digestion and toxins (*Ama*) accumulation which deeply contaminate the tissue and trigger the condition.

Symptoms of *Vicharchika* is similar with eczema that is *Kandu* (excessive itching), *Pidika* (boil/ pustule/vesicle), *Shyava* (discolouration/hyper pigmentation), *Bahustrava* (profuse oozing), and later *Raji* (marked linings/ lichenification/crisscross markings), *Ruja* (pain) and *Sarukshta* (excessive dryness)[3].

"सकण्डु: पिडका श्यावा बहुस्त्रावा विचर्चिका ॥ (च.चि.७/२६)

Due to the changing lifestyle and fast-food habits leads to the formation of *Dushivisha* and *Dushivisha* is the etiological factor of skin disorder (here eczema). According to modern science, use of local cream antibiotics, steroids, oral antibiotics, antihistamines, corticosteroids only mask the symptoms they do not affect the root cause of the disease and this is the reason Ayurveda recommend treatment plan for patients of eczema which include proper diet and specialized herbal combinations.

Vicharchika is type of *Kshudra kustha* according to *Ayurvedic* classics also *Vicharchika* is curable disease but in relapsing nature so it causes some troubles for physician and harassment for patients. *Vishadan tail* is mentioned in *Gadanigraha* for management of *Vicharchika* but no study was done which evaluate the efficacy of *Vishadan tail* in management of *Vicharchika* (eczema). Efficacy of drug is directly proportional to identify potency and purity of drug so for quality assurance purpose authentication and standardization of drug is need of time. *Vishadan tail* has *Kusthaghna, Vishaghna* and *Kandughna* properties so need to test the efficacy of tail. For this experimental study of eczema, swiss albino mice model selected this mouse model used in some pre-clinical study.[4,5] Humans and animals are similar as they have same organ system performing same task. humans share 95% of our genes with mouse making them an effective model for human body.[6]

There is lots of scope for research in skin disease as we know *Dushivish* is one of the causes of skin disease there is close relation between *Visha* and skin disease as because of symptomatic relief by the use of steroidal ointment this study is done to evaluate the effect of *Vishadan tail* in DNFB induced eczema in albino mice with references *to Dushivishjanya vicharchika* in this study we need to study eczema and effect of such formulation.

Aim, Objective & Hypothesis

Aim

To evaluate the efficacy of *Vishadan tail* in DNFB induced eczema in albino mice.

Objective

1) To study *Vishadan tail* in detail.
2) To study literature about *Vicharchika* as per Ayurveda and modern text as eczema.
3) To study *Dushivishjanya vicharchika* in detail.

Hypothesis

Null Hypothesis [H_0]

Vishadan tail is not significantly effective in DNFB induced eczema in albino mice.

Alternative Hypothesis [H_1]

Vishadan tail is significantly effective in DNFB induced eczema in albino mice.

Review of Literature

Vishadan Tail *[7]*

कम्पिल्लकनिशायुग्मैः शालनिर्यासचित्रकैः ।
पुरकीटारिसंयुक्तैः पालिकै: सुविचूर्णितैः ॥
एकीकृत्य समैरेभिर्विषस्य च पलद्वयम आतपे स्थापयेद्धीमान कटुतैल परिप्लुतम् ॥
विषादनमिदं मैल लेपात्सिध्मविचर्चिके हान्ति पामापचीव्यङः· दुष्टव्रणभगन्दरान।। (गदनिग्रह। प्रयोगखण्डे तेलधिकार 2/384-386)

Gadanigraha has mentioned *'Vishadan tail'* in *Kusthachikista* (*Prayog khande taildhikar* 2) and also mentioned by *Bharat bhaishajya Ratnakar.*[8]

It contains *Kampillaka, Haridra, Daru haridra, Shal niryas, Chitrak Pur (Guggul), Kitari (Vidang), Vish (Vatsanabh),* and *Katu tail*. It has *kusthaghna* properties here the main component of tail is *vish (Vatsanabh)* which is an important *Visha* explained in various ancient text which used in various skin disorder on other hand other content in the tail also has *Kusthughna, Kandughna, Vishaghna* properties. This study aims to prove the effect of *Vishadan tail* on eczema *(Dushivishjanya Vicharchika).*

Table 1: The drug *Vishadan Tail* includes

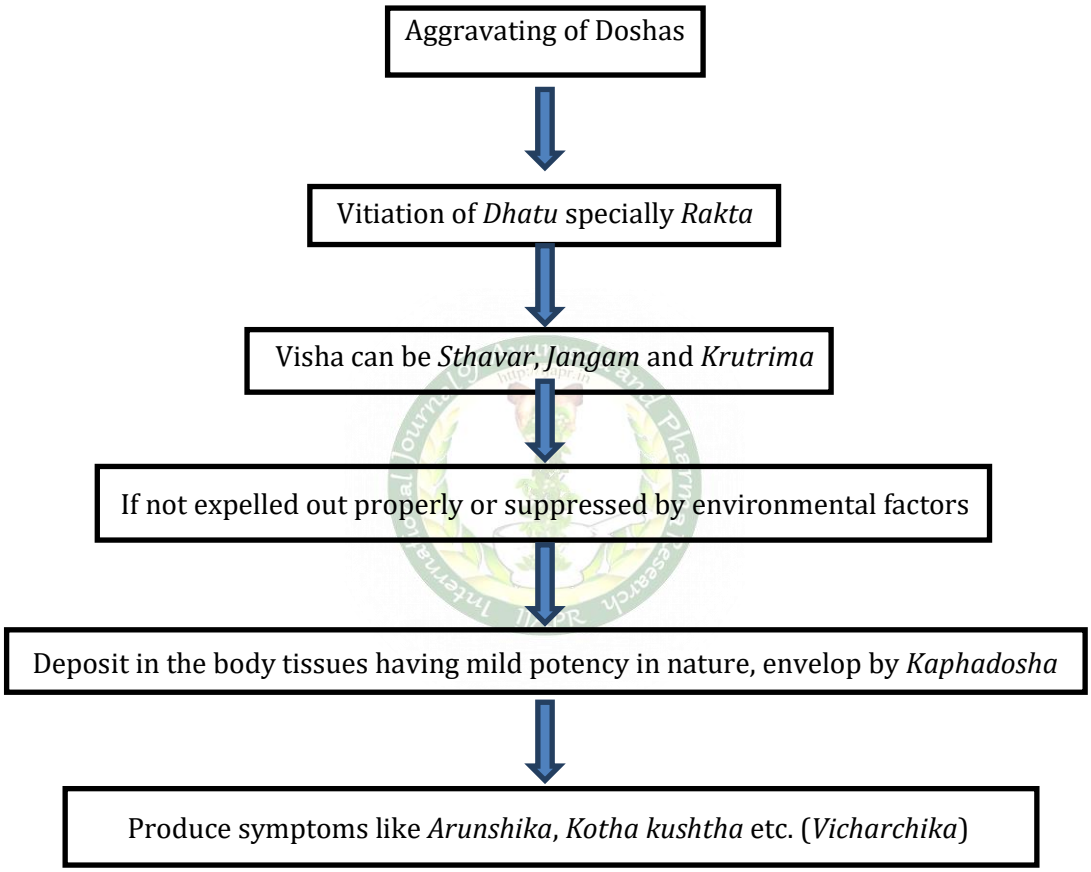
Drug name	Botanical name	Family
Kampillaka	*Mallotus Philippinesis muell*	Euphorbiaceae
Haridra	*Curcuma longa linn*	Zingiberaceae
Daru haridra	*Berberis aristata*	Berberidaceae
Shal niryas (Mochras)	*Bombax Malabaricum*	Bombacaceae
Chitrak	*Plumago zeylanica linn*	Plumbaginaceae
Pur (Guggul)	*Commiphora mukul*	Burseracae
Kitari (Vidang)	*Embelia ribes*	Myrsinaceae
Vish (Vatsanabha)	*Aconitum feroxwall*	Ranunculaceae

Vicharchika

Ayurveda identifies *Vicharchika* as one of the 18 distinct skin diseases. It can be correlated to eczema because signs and symptoms of *Vicharchika* are similar to that of eczema described in modern dermatology. Dermatitis is a frequent incidence found in India. Symptoms of dermatitis is resembling like that of *Kustha* i.e., *Vicharchika*. *Kandu* (excessive itching), *Pidika* (boil/pustule/vesicle), *Shyava* (discolouration/ hyper pigmentation), *Bahustrava* (profuse oozing), and later *Raji* (marked linings/ lichenification/crisscross markings), *Ruja* (pain) and *Sarukshta* (excessive dryness)[9,10]

Samprapti of *Dushivisha* and *Kushtha (Vicharchika)* [11-13]

The *Visha* that gets entered in the body through *Desha, Kaal, Anna, Diwaswaapa* vitiate the *Dhatus* and this is known as *Dushivisha*. *Desh Anupa, Prabhut anila shita varsha, Kaal shit anil durdina, Annasura, Tila, Kulatha, Vyayama, Maithuna, Krodha* all this vitiate the *Dhatus*. The *Dushivisha* entered in different *Dhatus* and produce symptoms according to it. It gets entered in the *Rakta dhat*u and produce *Kushtha* and *Visarpa*.



Vyadhighataka of *Vicharchika*[14]

Dosha: Tridoshas
Dushyas: Tvak, Rakta, Mamsa, Lasika
Agni: Jatharagnimandya, Dhatvaagnimandya.
Srotas: Rasavaha, Raktavaha, Mamsavaha, Swedavha
Srotodusti: Sanga, Vimargagamana
Udbhavasthana: Amashaya
Sanchara: Tvaka
Rogamarga: Bahya
Prabhava: Chirakari

Dushivisha is the root cause of maximum diseases. This leads to the formation of *Ama visha*. Here the referred *Agni* is *Bharajak agni* and its derangement causes the formation of toxic material at local level i.e. *Amavisha*. This *Amavisha* then spreads to the nearby area and disturbs the normal configuration of the *Dhatus* thereby leaving them prone to receive the toxic material. This susceptibility of the *Dhatus* progresses further. The three *Doshas* & the *Poshaka Ansha* of four *Dushyas* reach the susceptible *Dhatus* and settle there to start the pathology which leads to the manifestation of local symptoms.

Sadhya-Asadhyata[15]

1. *Sadhya: Vata-Kaphaja*
2. *Krichhasadhya: Vata-Pittaja, Kapha-Pittaja*
3. *Yapya: Medagata*
4. *Asadhya: Tridoshaja*

Chikitsasutra[16]

Counteracting the causative factors of disease means treatment; in Ayurveda it is called as *Chikitsa*. Everyone knows that skin disorders are for long time

period, time consuming. For treating them requires too much patience. According to *Acharya Charaka* disease can be cured by *Shaman*, *Shodhan* and *Nidanparivarjan* it means palliative treatment, bio purification method accordingly. *Vicharchika* is chronic form of *Kshudra Kushtha* can be effectively managed through *Shamana, Shodhana* and *Nidana parivarjana* which aim to interrupt the pathogenesis by eliminating the causative factors.

Eczema

Eczema or dermatitis is characterized by edema, vesiculation, erythematic, crusting, oozing and later lichenification. It is an inflammatory response of the skin due to multiple agents.In the practice of dermatology, diagnosing dermatitis or eczema clinically is the first step. Then decide the clinico-morphological pattern, viz. Contact, Atopic, Neuro-dermatitis, Gravitational, Endogenous or Seborrheic.

In initial stage of eczema it shows erythema and edema which leads to the formation of vesicles which are minute in structure in the area. After rupture of vesicles oozing of serous discharge from that occurs, which alternatively may dry up with crusting and scaling After occurrence of healing residual pigmentation may occurs. Sometimes, it leads in chronic stage and skin becomes thickened with exaggerated skin marking i.e. lichenified and also hyper pigmentation of skin occurs.

Treatment

1. Acute Eczema is managed with wet dressings or compresses.
   Normal saline, KMnO4 or 1% boric acid. This removes crusts, stops pozing and provides comfort.
2. Topical creams, particularly combination of glucocorticoid and antibiotic.
3. Severe secondary infection
4. needs systemic antibiotics. Ointments should not be used over oozing eczema as it cause occlusion and worsen oozing.
5. Creams are preferred in acute and sub-acute condition while ointments in chronic stage.

MATERIAL AND METHODOLOGY

STUDY SETTING

Pharmaceutical work of preparing '*Vishadan tail*' was carried out at department of *Rasashastra* and *Bhaishajya Kalpana* at our college. Experimental work was carried out at recognised Pharmacy College.

Preparation of *Vishadan Tail*

Principle

Vishadan tail preparation follow the process of *tail kalpana* as mentioned in *Gada nigraha* refrenced in *Gada nigraha kusthachikista* (*Prayog khande taildhikar* 2) & also metioned by *bharat bhaishajya ratnakar* part four in *kusthachikista* (*Tail prakram*, 6809)

Ingredients

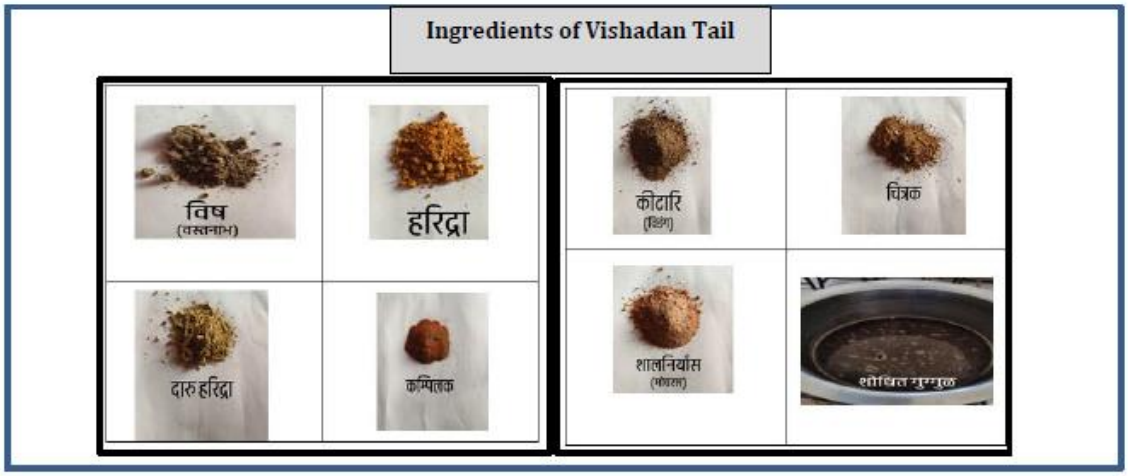
1. *Kampillaka*
2. *Haridra*
3. *Daru haridra*
4. *Shal niryas (mochras)*
5. *Chitrak*
6. *Pur (guggul)*
7. *Kitari (Vidang)*
8. *Vish (Vatsanabh)*

Instruments

1. *Khalwa yantra*
2. Open containers
3. Heating apparatus (gas stoves)
4. Cleans cloths
5. Digital weighing machine
6. Bottles

Process

- Collected all raw materials as mentioned above
- Make *Churna* of *Kampillaka haridra daru haridra shal niryas chitrak pur kitari* as taken as 2 pal each.
- *Shodhan* of *Kampillaka* done as process mentioned above
- *Shodhan* of *Vatsanabh* done and take *Shodhit vatsanabh* 4 pal and made *Churna*
- Take *Murchit katu tail* 2 *Prastha*
- Make *Kalka* (paste) of all *Churnas* and poured in *Katu tail*
- Add 8 *Prastha* water (*Chatur gunam*) and mix it well
- Put this formulation under low flame until water contained soaked completely
- After water contained soaked completely. *Sneha pak pariksha* (examination) done.
- Now formulation filter through clean cloths and store in bottle.



Experimental Study (Pre-Clinical Study)

Method of selection of study subject

A) **Inclusive criteria**

1) Healthy swiss albino mice of either sex will be considered.

2) Mice weighting about 25-30 gm will be include

B) **Exclusive Criteria**

1) Pregnant and disease mice

2) Mice less than 25 gm and more than 30gm

3) Mice which are under trial of other experiment

Experimental grouping

Animals were divided into 4 groups as follows

Group I: Normal Control

Group II: Disease Control (Eczema was induced by Topically applying 30 µL DNFB 0.1% v/v for 3 consecutive days. On 7th and 8th day mice were challenged by painting 50 µL DNFB (0.2% v/v)

Group III: Standard Control (Treated with 0.1g Betamethasone from 8th to 14th days every day)

Group IV: Treated with 15µL *Vishadan Tail* from 8th to 14th days every day

Treatment schedule

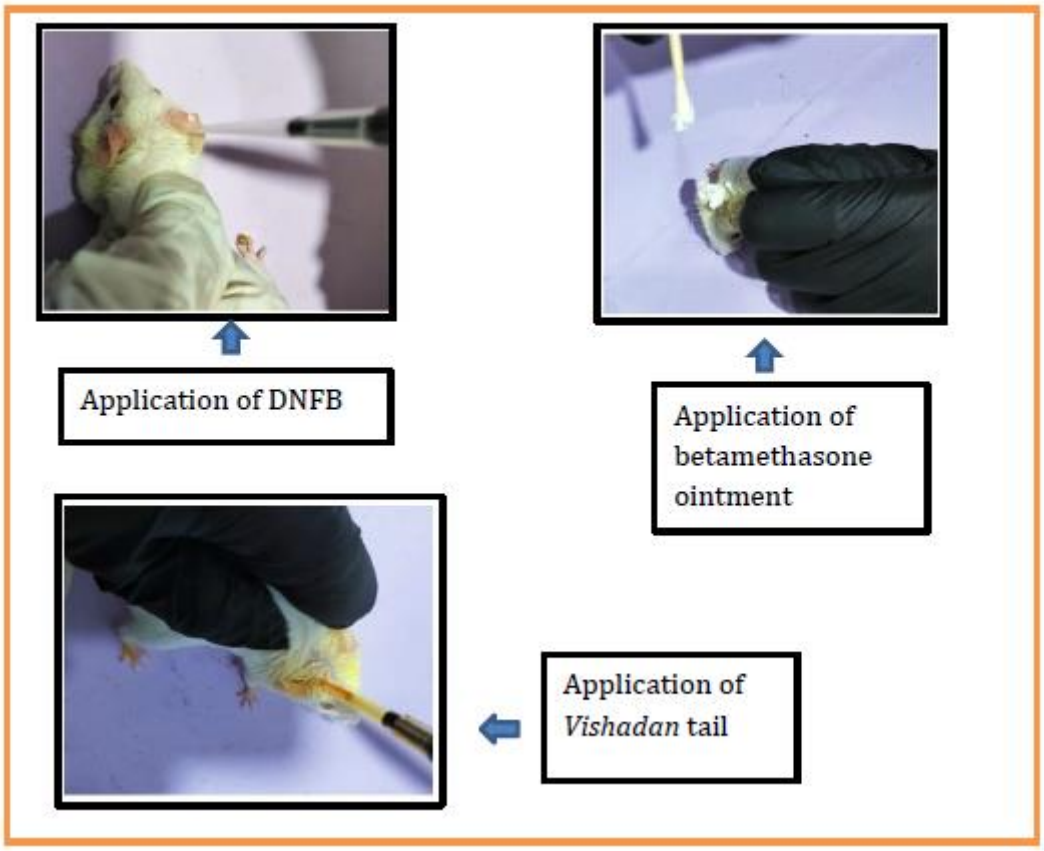
Animals were challenged by DNFB followed by topical application of *Vishadan Tail* at the dose of 15µL/Animal/day up to 14 days. The Standard Drug-Betamethasone ointment was also applied topically in a dose of 0.1g/Animal/Day up to 14 days.

Histopathological examination

Ear samples were taken 24 hr after the final DNFB painting and fixed in 10% buffered formalin, embedded in paraffin, sectioned at 3 µm, and then stained with hematoxylin and eosin. Followed by examination under Fluorescence microscope (Nikon).

Statistical analysis

All the values are expressed as mean ± standard error of the mean (S.E.M.) and analysed for Two-way ANOVA followed by Bonferroni post-tests using Graph pad Prism software 5.0 version.



Observation and Results

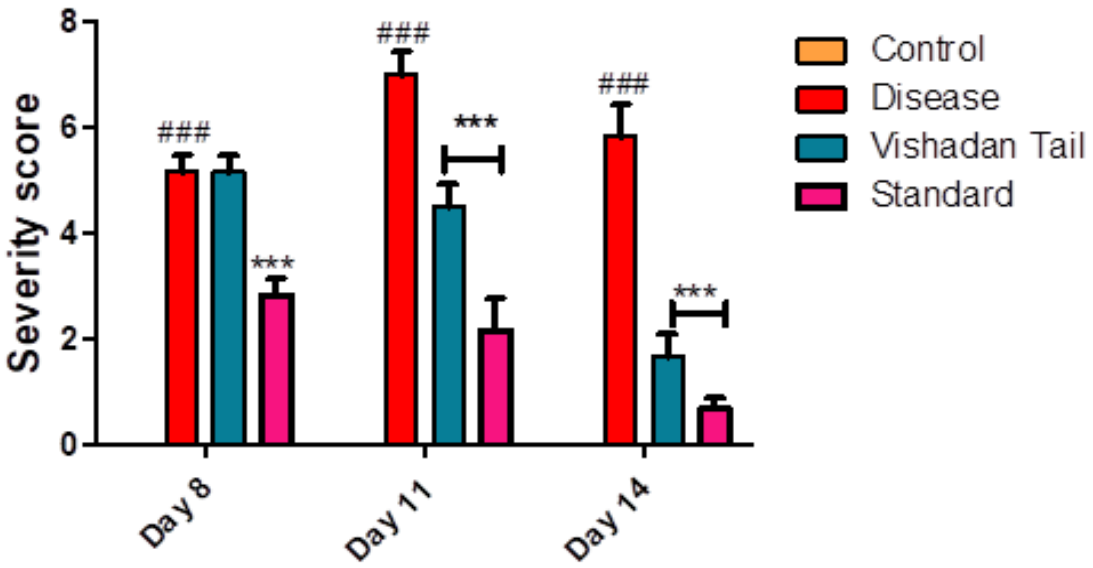
Anti eczema activity

Macroscopic assessment of the skin reaction determined by grading method [0 (none), I (mild) II (moderate) III (severe)] (follow ICDRG scale according mentioned symptoms) also severity of dermatitis was determined by scoring method. Each sign was scored as 0 to 3, where 0 represented no sign, 1 mild, 2 moderate, and 3 severe. This scoring was based on the severity of Erythma (E), Odema (O), Scaling (S). The total score (minimum 0 and maximum 12) from the mention symptoms of each mouse was taken as the score for that mouse.

Table 2: Macroscopic assessment of the skin reaction determined by grading method

Days	Grading according to skin reaction											
	Control			Disease			Standard			Vishadan tail		
	E	O	S	E	O	S	E	O	S	E	O	S
8th	0	0	0	III	III	III	II	II	III	III	III	III
11th	0	0	0	III	III	III	II	I	II	II	II	II
14th	0	0	0	III	III	III	I	I	II	I	I	I

Fig no 1 Macroscopic assessment of disease, standard & experimental (*Vishadan tail*) group



Graph no1 : Severity score

Effect of *Vishadan Tail* on ear skin severity index induced by repeated 2,4-dinitrofluorobenzene (DNFB) treatment in mouse eczema model. All values are expressed as mean ±SEM. (n=6). Data was analyzed by one-way ANOVA followed by Bonferroni post test using Graph Pad Prism Software. P<0.05 was considered as statistically significant. ###P<0.001 compared with the control Group, ***P<0.001 compared with the disease Group.

Statistical Analysis

All the values are expressed as mean ± standard error of the mean (S.E.M.) and analysed for Two-way ANOVA followed by Bonferroni post-tests using Graph pad Prism software 5.0 version

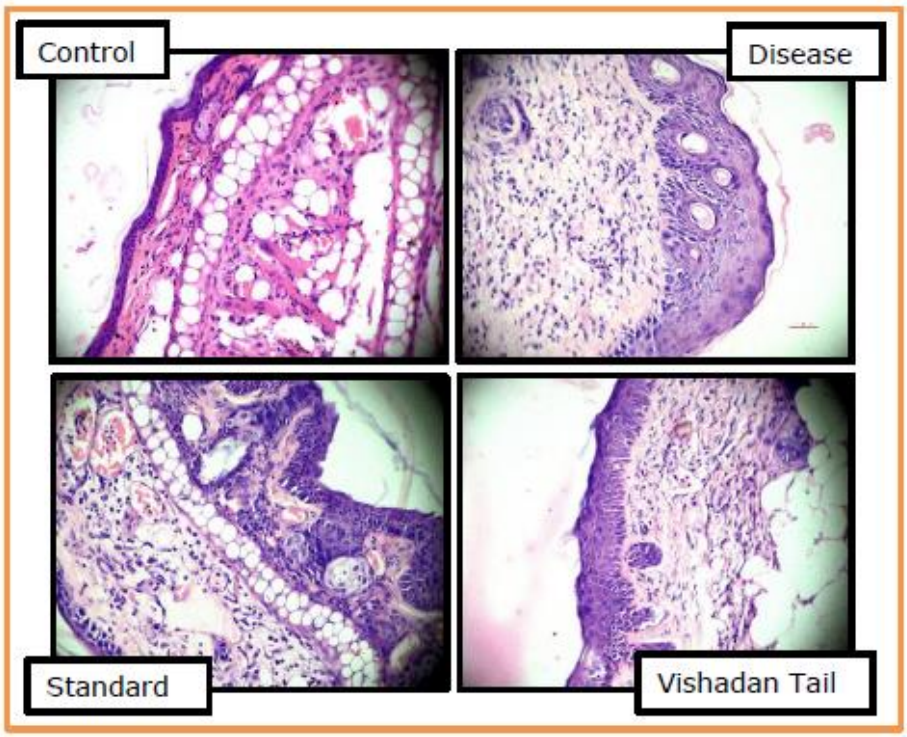
Two-way RM ANOVA				
Source of Variation	% of total variation	P value		
Interaction	8.23	< 0.0001		
Time	5.89	< 0.0001		
Treatment	75.63	< 0.0001		
Subjects (matching)	5.7028	0.0066		
Source of Variation	**P value summary**	**Significant?**		
Interaction	***	Yes		
Time	***	Yes		
Treatment	***	Yes		
Subjects (matching)	**	Yes		
Source of Variation	**Df**	**Sum-of-squares**	**Mean square**	**F**
Interaction	6	38.8	6.47	12.1
Time	2	27.8	13.9	25.9
Treatment	3	357	119	88.4
Subjects (matching)	20	26.9	1.34	2.51
Residual	40	21.4	0.536	
Number of missing values	0			
Bonferroni posttests				
Control vs Disease				

Treatment	Control	Disease	Difference	95% CI of diff.
Day 8	0.0	5.17	5.17	3.55 to 6.78
Day 11	0.0	7.00	7.00	5.38 to 8.62
Day 14	0.0	5.83	5.83	4.22 to 7.45
Treatment	**Difference**	**T**	**P value**	**Summary**
Day 8	5.17	9.97	P<0.001	***
Day 11	7.00	13.5	P<0.001	***
Day 14	5.83	11.3	P<0.001	***
Control vs Vishadan Tail				
Treatment	**Control**	**Vishadan Tail**	**Difference**	**95% CI of diff.**
Day 8	0.0	5.17	5.17	3.55 to 6.78
Day 11	0.0	4.50	4.50	2.88 to 6.12
Day 14	0.0	1.67	1.67	0.0498 to 3.28
Treatment	**Difference**	**T**	**P value**	**Summary**
Day 8	5.17	9.97	P<0.001	***
Day 11	4.50	8.68	P<0.001	***
Day 14	1.67	3.22	P<0.01	**
Control vs Standard				
Treatment	**Control**	**Standard**	**Difference**	**95% CI of diff.**
Day 8	0.0	2.83	2.83	1.22 to 4.45
Day 11	0.0	2.17	2.17	0.550 to 3.78
Day 14	0.0	0.667	0.667	-0.950 to 2.28
Treatment	**Difference**	**T**	**P value**	**Summary**
Day 8	2.83	5.47	P<0.001	***
Day 11	2.17	4.18	P<0.001	***
Day 14	0.667	1.29	P > 0.05	Ns
Disease vs Vishadan Tail				
Treatment	**Disease**	**Vishadan Tail**	**Difference**	**95% CI of diff.**
Day 8	5.17	5.17	0.0	-1.62 to 1.62
Day 11	7.00	4.50	-2.50	-4.12 to -0.883
Day 14	5.83	1.67	-4.17	-5.78 to -2.55
Treatment	**Difference**	**T**	**P value**	**Summary**
Day 8	0.0	0.0	P > 0.05	Ns
Day 11	-2.50	4.82	P<0.001	***
Day 14	-4.17	8.04	P<0.001	***
Disease vs Standard				
Treatment	**Disease**	**Standard**	**Difference**	**95% CI of diff.**
Day 8	5.17	2.83	-2.33	-3.95 to -0.717
Day 11	7.00	2.17	-4.83	-6.45 to -3.22
Day 14	5.83	0.667	-5.17	-6.78 to -3.55

Treatment	**Difference**	**T**	**P value**	**Summary**
Day 8	-2.33	4.50	P<0.001	***
Day 11	-4.83	9.33	P<0.001	***
Day 14	-5.17	9.97	P<0.001	***
Vishadan Tail vs Standard				
Treatment	**Vishadan Tail**	**Standard**	**Difference**	**95% CI of diff.**
Day 8	5.17	2.83	-2.33	-3.95 to -0.717
Day 11	4.50	2.17	-2.33	-3.95 to -0.717
Day 14	1.67	0.667	-1.00	-2.62 to 0.617
Treatment	**Difference**	**T**	**P value**	**Summary**
Day 8	-2.33	4.50	P<0.001	***
Day 11	-2.33	4.50	P<0.001	***
Day 14	-1.00	1.93	P > 0.05	Ns

Histopathological Studies

Ear Histopathology: To determine whether *Vishadan Tail* affected inflammatory cell infiltration, histological specimens were prepared from the ear lobes that were obtained. Repeated DNFB treatment induced severe ear lobe inflammation and inflammatory cell infiltration. The control group showed normal histology of the ear. *Vishadan Tail* administered inhibited DNFB-induced inflammatory cell infiltration.



End statement

Result reveals that *Vishadan tail* effective in DNFB induced eczema in albino mice.

DISCUSSION

Experimental study (Pre-clinical)

a. General observation
b. Experimental parameter evaluation

a. General observation

Humans and animals are similar as they have organ systems performing the same task. Humans share 95% of our genes with a mouse making them an effective model for the human body. Many previous studies For this experimental study of eczema, swiss albino mice model selected this mouse model used in some pre clinical study ref. [strain specific response of mice of imq induced psoriasis published in journal of basic clinical physiology & Pharmacology (2020-

0112),Topically used herbal product for treatment of psoriasis - mechanism. of Action, drug delivery, clinical studies (published online plantarned 2016; 12; 1447-1455)]

Mice were divided into four groups (normal control disease control standard control and experimental group) with 6 mice in each group. Dinitrofluorobenzene (DNFB) selected for induction of allergic eczema in albino swiss mice which is highly toxic irritant compound. Skin lesion such as erythema oedema scaling diminished by topical application of vishadan tail as well as standard drug

Experimental parameter evaluation

Except normal control animals every animal were sensitized with 30 µL of 0.1% DNFB.on day 7 of the experiment animals were challenged with DNFB. Macroscopic assessment of the skin reaction determined by grading method [0 (none), I (mild) II (moderate) III (severe)] (follow ICDRG scale according mentioned symptoms) also severity of dermatitis was determined by scoring method. Each sign was scored as 0 to 3, where 0 represented no sign, 1 mild, 2 moderate, and 3 severe. This scoring was based on the severity of Erythma (E), Odema (O), Scaling (S). The total score (minimum 0 and maximum 12) from the mention symptoms of each mouse was taken as the score for that mouse. On day 8 treatmnt initiated.

It was observed that severity score high on 8th day as it observe on day 11 and 14 treatment with standard cream formulation and test drug (*Vishadan tail*) decreased this degree of each sign and severity score as mentioned above. On the basis of degree of erythema scaling oedma and severity score and statistical analysis confirmed that these differences were highly significant ($P < 0.001$). These findings suggest that *Vishadan tail* is useful against dinitroflurobenze induced eczema in albino mice.

Histopathological Studies

Vishadan tail- treated group led to reduced epidermal thickness and less chronic inflammation histologically compared to the disease group. This is an important finding, as hyperkeratosis and acanthosis are characteristic features of psoriasis, and the reduction in these markers suggests that *Kanakbindvarishta* helps in normalizing epidermal turnover and reducing the chronic inflammatory state.

CONCLUSION

The present study entitled as "Experimental Study to Evaluate the Efficacy of *Vishadan Tail* in Dinitrofluorobenzene Induced Eczema in Albino Mice with Reference to *Dushivishjanya Vicharchika*. The symptoms of *Vicharchika* is similar to that of eczema which is common inflammatory skin condition.

- On 8th day severity score higher in disease and experimental group as compare to standard group
- On 11th day severity score higher in disease control as compare with experimental and standard group
- On 14th day severity score is less in experimental and standard group as compared to disease control

On each follow up

- Reduction of Severity score in experimental group on 11th day as compared on 8th day.
- Reduction of severity score gradually in standard group from 8th to 14th day
- On 14th day there is significant reduction of severity score in experimental group
- To determine whether *Vishadan Tail* affected inflammatory cell infiltration, histological specimens were prepared from the ear lobes that were obtained. Severe ear lobe inflammation and inflammatory cell infiltration were observed following repeated DNFB treatment whereas the control group showed normalear histology. *Vishadan Tail* treatment suppressed DNFB-induced inflammatory cell infiltration.

Above all changes in disease control standard control and experimental group it was seen that observation that severity score gradually less or improve in experimental group. From above observation it was concluded that Vishadan tail is effective as Betamethasone ointment (Standard group)

On the basis of all observations and result of experimental study the null hypothesis of study is rejected accepting alternated hypothesis. Thus it is concluded that Vishadan tail is effective in DNFB induced eczema in albino mice.

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