

1 **A CLINICAL STUDY TO EVALUATE THE EFFICACY OF PANCHAVALKADI TAILAM IN**
2 **IRRITANT POSONING W.S.R TO CEMENT ALLERGY**

3
4 **ABSTRACT**

5 Ayurveda has mentioned different types of poisons, characteristic symptoms and its management.
6 Unique concepts of Dooshivisha and Garavisha are mentioned by Agadatantra, which plays a major role
7 in the manifestation of disease. Cement allergy is caused by the physical properties of cement that
8 irritate the skin mechanically. Panchavalkaditailam explained in ‘Sahasrayogam’ is found effective in
9 cement allergy. Initially the various ingredients of formulation of Panchavalkaditailam mentioned in
10 Sahasrayogam procured after proper identification. The various ingredients are Panchavalka, Nisha,
11 Gopi, Tila taila, Rambha, Udakakanda, Madhooka, twak, sevya, Amaya, Chandana.

12 Fifteen patients from various construction sites, suffering from cement allergy coming under inclusion
13 criteria were randomly selected.

14 **RESULT**

15 Ingredients in panchavalkaditailam is having dahaprasamana, kandugna and vruropana action.
16 Synergistic or combined action of ingredients helps in treating the major symptoms like itching, burning
17 sensation, skin cracks and blisters.

18 The overall result shows there is a significant effect in treatment with Panchavalkaditailam in the
19 symptoms of cement contact dermatitis.

20 Keywords:PanchavalkadiTailam,Cement allergy

21
22 **INTRODUCTION**

23 Healthy body and healthy mind make a man master in the art of happy living.Living in twenty first
24 century, man has discovered plenty of scientific methods and techniques. He is exposed to various types
25 of chemicals which are having mild to severe poisonous effect, resulting in different diseases. One
26 among them is ‘cement allergy.’ Ayurveda has mentioned different types of poisons, their characteristic
27 symptoms and its management. Today human beings are facing multitude of problems. The reason
28 behind this is rapid industrialization and commercialization. Onclose observation over this, we can
29 consider the cause of all being indiscriminate use of resources and which lead to endogenous and
30 exogenous toxicity. These problems well explained in Agadatantra, subject deals mainly natural poisons
31 and artificial poisons (garavisha).

32 'Panchavalkaditailam' explained in Sahasrayogam is effective in Raktapittapradhana disorders. The
33 ingredients present in this yoga having Dahagna, Vishagna, Kandugna and Vrunaropana action. This
34 medicine is very cost-effective and potent enough to cure the disease and patient can take it as per their
35 convenience. Being a combination of drugs bearing similar qualities a synergistic action can be assumed
36 and 'Panchavalkaditailam' is a logical choice.

37

38 CEMENT ALLERGY

39 The word 'allergy' refers to an altered reaction or hyper-sensitivity to a particular substance which a
40 majority of individuals can tolerate easily. Cement allergy is an allergic reaction in response to external
41 stimulus acting either as an allergen or an irritant.

42 Cement allergy is an allergic reaction to chemicals in cement like hexavalent chromium can cause
43 occupational dermatitis, characterized by skin irritation, itching, and potentially severe reactions
44 like cement burns.

45

46 MECHANISM OF DISEASE PROCESS

47 The skin allergy really begins with a process called sensitization. It starts with a penetration of allergic
48 substance into the outer layer of skin. This process starts from 4 days to 3 weeks. Once penetrated, the
49 allergic substance combines with natural skin proteins. The combination formed by allergic substance
50 and skin protein is then carried throughout the body by white blood cells called lymphocytes. When
51 sensitized workers are exposed to cement, lymphocytes recognize allergen and react with it and release
52 tissue-damaging chemicals which cause itching, pain, redness, swelling and formation of small blisters
53 on skin.

54 In Ayurveda, 'Gara Visha' refers to an artificial poison formed by the combination of two or more
55 substances, leading to chronic toxicity and various health problems.

56 It is Acharya Delhana who clearly mentions that garavisha has its domain not only in annapana (foods
57 and drinks) but can be used in a variety of mediums. In present era, exposure to many chemicals, toxins,
58 pollution, etc. give rise to contact dermatitis in hyper-sensitive persons.

59

60 OBJECTIVE

61 To evaluate the effect of Panchavalkaditailam in irritant cement contact dermatitis.

62

63 INCLUSION CRITERIA

- 64 1. Patients between 18 to 60 years of age.
- 65 2. Patients with continuous exposure to cement.

66 3. Patients irrespective of age, sex and religion are taken.

67 **EXCLUSION CRITERIA**

68 1. Patients suffering from other systemic diseases or other skin diseases that interfere with
69 prognosis and treatment of disease.

70 2. Patients suffering from fatal diseases like skin carcinoma

71

72 **TREATMENT PROTOCOL**

73 Fifteen patients fulfilling the diagnostic and inclusion criteria will be selected randomly. Diagnosed
74 patients of cement allergy, Panchavalkaditailam was applied externally twice daily for 4 weeks.

75

76 **ASSESSMENT CRITERIA**

77 Effect of treatment will be assessed on the basis of gradation for both subjective and objective
78 parameters before and after treatment.

79

80 **SUBJECTIVE PARAMETERS**

- 81 • Itching
- 82 • Burning sensation

83

84 **OBJECTIVE PARAMETERS**

- 85 • Scaling
- 86 • Cracking
- 87 • Bleeding
- 88 • Blisters

89

90 **METHODOLOGY**

91 Different phases of the study: The current study was carried out through different systematically
92 designed steps to get unbiased results. The following steps were adopted to complete the study.

93 1. Preparation of Panchavalkadithailam

94 2. Preparation of case proforma

95 3. Conceptual study

- 96 4. Study design
 97 5. Collection and analysis of data
 98 6. Discussion and interpretation of findings
 99 7. Conclusion of the study

100

101 **DRUG REVIEW - PANCHAVALKADI TAILAM**

102 Panchavalkaditailam explained in sahasrayogamis effective in raktapittapradhanadisorders. The
 103 ingredients in Panchavalkaditailam are:

104

No.	Ingredients
1	Panchavalkala
2	Nisha
3	Gopi
4	Tilataila
5	Kadhali
6	Kumudam
7	Yashtimadhu
8	Twak
9	Sevya
10	Amaya
11	Chandana

105

106 Here panchavalkaditailam has both Vishagna as well as Kushtagnaproperties. Panchavalka is the barks of
 107 five trees. These are also known as 'Panchaksirivrikshas'. The drugs grouped under panchavalkala
 108 are Nyagrodha, Udumbara, Aswatha, Plaksha and Parisha.

109

INGREDIENTS	BOTANICAL NAME	FAMILY	PROPERTIES
NYAGRODA (VATA)	Ficus Bengalensis Linn chronic	Moraceae	Rasa – Kashaya Guna - Guru, Rooksha. Veerya - Sheeta, Vipaka - Katu, Karma - Dahagnata, Vrnahara, Visarpahara. Doshagnata -- kapha pittahara.
UDUMBARA	Ficus racemosa Linn	Moraceae	Rasa - Kashaya,

			Guna - Guru, Rooksha Veerya - Sheeta, Vipaka - Katu Karma - Vranasodhaka, Vranaropaka, Dahahara, Trsnahara, Raktadoshahara Doshagnata - kapha pittahara.
ASWATHA	Ficus religiosa Linn	Moraceae	Rasa - Madhura, kashaya, Tikta. Guna -Guru, Rooksha. Veerya - Sheeta. Vipaka - Katu Karma – Rakthapittahara, Vranahara, Dahahara. Doshagnata - Kapha pittahara.
PLAKSHA	Ficus microcarpa Linn.	Moraceae	Rasa - Kashaya,katu. Guna - Rooksha. Veerya - Sheeta Vipaka - Katu. Karma -Dahahara, Raktapittahara, Vranadaha. Doshagnata -, Rakta, Pitta, Kaphahara.
PARISHA	Ficus arnottiana	Moraceae	Rasa - Kashaya, madhura, Amla. Guna - Laghu, Ruksha, snigdha. Veerya - Sheeta. Vipaka - Katu. Karma - Dahahara, Sandhaniya. Doshagnata - Pitta vatahara
HARIDRA(NISHA)	Curcuma longa	Scitaminae	Rasa - Tikta, Katu. Guna - Ruksha, laghu. Veerya - Ushna. Vipaka - Katu. Karma - Kapha vata hara, Lekhana, Vishaghna. Doshagnata - Pitta vatahara
GOPI(SARIVA)	Hemidismus indicus	Asclepiadaceae	Rasa -Madhura Tikta Guna - Guru, Snigdha

			Veerya - Sheeta Vipaka – Madhura Karma – Grahi Doshagnata - Thridoshasamaka mainly pittagna
TILATAILA	Sesamum Indicum Linn.	Pedaliaceae	Rasa - Madhra, kashaya, Tikta. Guna - Guru Snigdha. Veerya - Ushna. Vipaka - Madhura. Karma - Twachya, Balya Doshagnata - Thridoshasamaka mainly pittagna
KADALI	Musa paradisiacal Linn	Musaceae	Rasa –Madhurarasa Guna - Guru snigdha Veerya - Sheeta Vipaka - Madhura Karma - Dahahara, Brmhana, Vrsya. Doshagnata –Pittagna
KUMUDAM	Nymphaea nouchali	Nymphaeaceae	Rasa – Madhura Guna – Snigda Veerya – Sheeta Vipaka – Madhura Karma – Trsna, Daha, Sphota, Vishahara Doshagnata –Pittagna
YASHTIMADHU	Glycyrrhiza glabra Linn	Fabaceae	Rasa - Madhura. Guna - Guru, Snigdha. Veerya - Sheeta. Vipaka - Madura Karma - Dahahara ,Vishahara Doshagnata – Kapha pittahara
TWAK	Cinnamomum Zeylanica	Lauraceae	Rasa - Katu, Tikta, Madhurarasa. Guna - Laghu, Rooksha, Teekshna. Veerya - Usna. Vipaka - Katu. Karma -Vatapittahara Doshagnata –Pittahara
SEVYA (USHIRA)	Vetiveriazizanoides	Graminae	Rasa - Tikta Madhura.

	Linn.		Guna - Ruksha,Laghu. Veerya - Sheetha. Vipaka - Katu. Karma - Kapha pittahara
AMAYA(KUSHTA)	Saussurialappa	Asteraceae	Rasa -Tikta,Madhura. Guna -Laghu,Ruksha. Veerya -Ushna. Vipaka -Katu. Karma -Vata kapha hara,lekhaniya.
CHANDANA	Santalum album Linn	Santalaceae	Rasa - Tikta, Madhura. Guna - Laghu Rooksha Veerya - Sheeta Vipaka - Katu. Karma - Varnya, Dahaprasamana Doshagnata -Kapha vatahara.

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111 **Drug Standardization and Safety Protocol:-**

112 All the ingredients mentioned above were procured from the market. These were then authenticated by
113 the experts.

114 **PREPARATION OF TAILA**

Sl. No.	Ingredients	Quantity
1	Panchavalka	3kg
2	Nisa	3kg
3	Gopi	3kg
4	Tilatila	6lts
5	Rambha	100 gm
6	Udakakanda	100gm
7	Twak	100gm
8	Sevya	100gm
9	Amaya	100gm
10	Chandana	100gm

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116 Taila was prepared on the basis of Taila Kalpanapreparation. At first Kashaya has to be prepared, then it
117 has to add with tilataila, till the Sneha Siddhi Lakshanas were obtained.

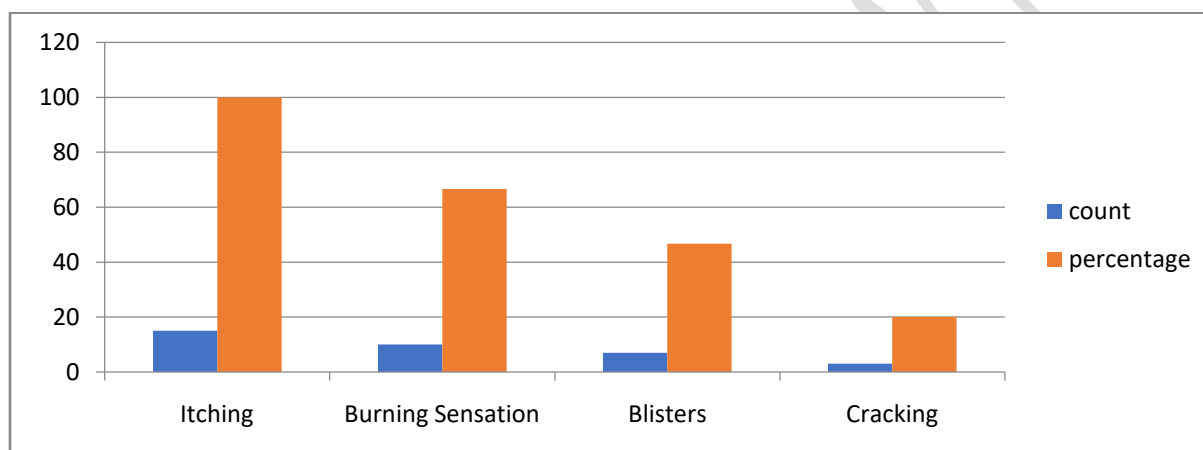
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119 OBSERVATION

Signs and Symptoms	count	Percentage
Itching	15	100
Burning Sensation	10	66.67
Blisters	7	46.67
Cracking	3	20

120

121 Signs and symptoms wise distribution of 15 patients showed that 100% of patients have itching, 66.67%
122 of patients have burning sensation, 46.67% of patients have blisters and 20% of patients have cracks.



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124

125 RESULT

126 The observations procured on the assessment parameters of 15 patients before and after treatment were
127 statistically analyzed to determine the effect of treatment with Panchavalkaditailam.

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129 PERCENTAGE OF RELIEF

Symptoms	%of Relief
Itching	64.29
Burning Sensation	60
Blisters	50

Cracking	50.94	130
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137 **DISCUSSION**

138 The drug Panchavalkaditailam is taken from text 'Sahasrayogam'.The ingredients in this taila
139 haveDahaprasamana,Kandugna,Vishagna properties. The combined effect of ingredients helps in
140 reducing the symptoms of cement allergy.

141 Panchavalkaditailam,a combination of drugs contains Kashaya,Tikta, Katurasa which exerts Kandugna,
142 Kushtagna,Dahaprasamana and Twachya action on the skin. This relieves the symptoms of cement
143 allergy such as burning sensation, itching, blisters and cracking. Dryness caused by the vitiation of vata
144 dosha is reduced because of snigdaguna andvatahara properties of taila.

145

146 **CONCLUSION**

147 There are many medications related to skin ailments. Panchavalkaditailam which is explained in
148 Sahasrayogam shows its efficacy in treating the symptoms like itching, burning sensation, cracking and
149 blisters. The ingredients ofPanchavalkaditailam are potent enough to bring down the symptoms of
150 cement allergy. Further studies can be conducted with internal administration of drugs along with
151 Panchavalkaditailam to treat Cement allergy.

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