



A Preliminary Pharmaceutico Chemical Analysis Of Snuhyadi Varti-A Polyherbal Ayurvedic Formulation

¹Dr Prasadshakti G Gannur, ²Dr Sachin Patil, ³Dr Basavaraj S Hunasagi

¹Ph.D Scholar, ²Professor & HOD, ³Associate Professor

^{1,2}Dept of Shalyatantra, ³Dept of Pharmacognosy

^{1,2}SJGCHS Ayurveda Medical college and Research centre, Ghataprabha, Karnataka, India

³BLDEA's Shri Sanganabasava Mahaswamiji college of Pharmacynand research centre, Vijayapur,
Karnataka, India

Abstract: In classics various different types of varties were mentioned for the management of Nadivrana, out of eight types of nadivrana shalyaja nadivrana can be corelated with Pilonidal sinus with its clinical features. Pilonidal sinus describes a hair-filled cavity in the subcutaneous fat of the post sacral intergluteal region known as the natal cleft. In spite of various advancement in surgical flap techniques treatment of pilonidal sinus remain unresolved. Varti chikitsa is giving Promising results. Chakradutta and Bhaishajya ratnavali have mentioned the use of Snuhyadi varti in treating of nadivrana and it was clinically found to be very effective also. Till today no any previous work done on Preliminary Pharmaceutico chemical analysis of this Snuhyadi varti. Hence it was decided to perform Pharmaceutico chemical analysis to understand the probable mode of action of Snuhyadi varti. Varties were Prepared as per the classical reference and finished product was analysed Phyto-chemical analysis with various extracts revealed the presence of phytoconstituents like Sterols, Alkaloids, Resins, Carbohydrate, Urea Tannins & phenolic compounds, Flavonoids, Saponins suggest its anti-inflammatory, anti-fungal, antioxidant and wound healing properties.

Key words: Nadivrana, Pilonidal sinus, Snuhyadi varti, Pharmaceutico chemical analysis

Introduction

Nadivrana manifests due to negligence of *Vranashopha*.¹ It persists due to presence of *Shalya* like *Bala* (hair) and *Puya* (pus). *Shalyaja Nadivrana* is one among the 8 types of *Nadivrana*. *Shalyaja Nadivrana* can be co-related with Pilonidal sinus with its clinical features. Pilonidal sinus is the disease that commonly arises in the hair follicles of the natal cleft of sacro-coccygeal area. Pilonidal sinus means nest of hairs in greek,² also called jeep bottom because it was very common in jeep drivers, Incidence of Pilonidal sinus is about 26 per 1,00,000 populations, typically in 20-30 years of age³ Ayurvedic line of treatment for *Shalyaja Nadivrana* includes surgical and para-surgical procedures like *Chedana Karma*, *Kshara karma* *Kshara sootra prayoga*, *Kalk*, *lepa*, *Taila Poorana*, usage of *Vartichikitsa*.⁴ In *Bhaishajya Ratnavali*, *Snuhyadi Varti* is mentioned for treatment of *Nadivruna* Bhagandara⁵ and clinically it was found to be very effective. Thus it was planned to perform Preliminary Pharmaceutico chemical analysis of *snuhyadi varti* to understand Probable Mode of action of the *Snuhyadi varti*.

Ingredients of *snuhyadi varti* are Daruharidra sookshma Choorna (Berberis arista.), Snuhi Ksheera (Euphorbia Nerifolia) and Arka Dugdha (Calotropis procera). The report on the Pharmaceutico chemical analysis of *snuhyadi varti* includes organoleptic, physico-chemical, Pharmoceutical and Phyto chemical parameters.

Materials and Methods

Collection/Procurement of the drug: Daruharidra was procured from Market and Arka dugdha and snuhi kshreer were collected from the herbal garden attached to SJGCHS Ayurvedic medical college and all ingredients were Authenticated by Dept of Dravyaguna SJGCHS AMC Ghataprabha

Preparation of Snuhyadi varti: Varties were prepared pharmacy attached to SJGCHS Ayurvedic medical college, as per the classical reference in *Bhaishajya Ratnavali* by taking Equal quantity of Daruharidra sookshma choorna, Snuhi kshreera and arka dugdha and triturated well till they all get mixed properly and varties were prepared and dried. Varties were found to be very friable and not supposed to have required hardness to introduce into the Nadivrana (Pilonidal sinus). So instead of Daruharidra Sookshma choorna it was planned to use Daruharidra Rasakriya which is again mentioned in classics for Nadivrana in chakradutta and Daruharidra Rasakriya is purchased from GMP certified PAVAMAN Pharmaceuticals Vijayapur. Daruharidra Rasa kriya Equal quantity of Snuhi Kshreera and Arka dugdha were taken triturated well in Khalwa for about 1hr and when it becomes uniformly mixed varties of different sizes were Prepared. dried and sent for Pharmaceuticochemical analysis to Dept. of Pharmacognosy and Dept of Pharmaceutics BLDEA SSM College of Pharmacy Vijayapura.

Organoleptic Evaluation Various parameters such as colour, odour, taste, touch and texture of the finished product (varti) were observed and recorded.

Physico-chemical Analysis: In physical evaluation moisture content, ash values viz., total ash, Acid insoluble ash value, Water insoluble ash value as well as PH value etc. were determined.

Pharmaceutical Analysis Solubility test, Uniformity of weight test, Hardness test, Friability test and Disintegration tests were conducted and values recorded.

Phyto-chemical Analysis Preliminary tests were carried out with various extracts for the presence or absence of phytoconstituents like Sterols, alkaloids, Resins, Carbohydrate, urea tannins & phenolic compounds, flavonoids, saponins.

Results and Discussion:

As there is no any previous Pharmaceuticochemical standardization was done related to snuhyadi varti whatever data obtained in our study was discussed below.

- In Organoleptic analysis Appearance was Fine, taste was found to be Acrid, Bitter Odor was Characteristic and color was black brown. (Table: 2)
- .Physico Chemical analysis the Moisture Content / LOD (Loss on Drying was found to be **4%** and PH was **7.2**.(Table:3)
- Pharmaceutical Analysis has shown Hardness test:**1.5**, Friability test:**1.2%**, Disintegration:**03 min**.(Table:4)
- Phyto-chemical Analysis Test for sterols was +ve which proves anti -inflammatory, anti-bacterial and anti-fungal activity of the Snuhyadi varti. Alkaloids present in snuhyadi varti suggests Vaso dilatory, Analgesic , Anti-bacterial activity of Snuhyadi varti. Presence of saponins proves Anti-inflammatory, Antibacterial, Antifungal, Anti viral, insecticidal, cytotoxic, molluscicide actions of Snuhyadi varti. Positive test for Flavonoids will explain Anti-oxidant, anti-inflammatory and anti-viral action of Snuhyadi varti. Presence of Urea in compound might have helped remove dead tissue from the wound and helped for wound healing (Table:5)

Table 1-ingredients of snuhyadi varti

Name of the ingredient	Botanical Name	Part used	Ratio
Shnuhi	Euphorbia Nerifolia	Kshreera	1
Arka	Calotropis procera	Dugdha	1
Daruharidra	Berberis aristata	Moola twak	1

Table 2: Organoleptic characters of snuhyadi varti

Parameters	Results
Appearance:	Fine
Taste:	Acrid, Bitter
Odor:	Characteristic
Color:	black brown

Table 3: Physicochemical constants of Snuhyadi varti

Parameters	Results
Moisture Content / LOD (Loss on Drying)	4%
PH	7.2
Ash Value	11.5%
Acid insoluble ash	7%
Water insoluble ash	0.09%
Specific Gravity	---

Table 4: Pharmocetical analysis of Snuhyadi varti

Parameters	Results
Solubility test:	Soluble in alcohol
Uniformity of weight test:	± 0.194 mg. (avg wt- 300mg)
Hardness test:	1.5
Friability test:	1.2%
Dissolution:	--
Disintegration	03min

Table 5: Phytochemical analysis of snuhyadi varti

Sr. No.	Tests	Powder	Formulation
1)	Test for sterols a)Salkoswaskis test b)Leiber mans burchads test c)Sulfer test	-ve -ve -ve	-ve -ve + ve
2)	Test for Terpenoids a) Salkoswaskis test	-ve	-ve
3)	Test for Alkaloids a)Mayer`s test b)Wagner`s test c)Dragendroff`s test d)Hagger`s test e)Ammonium renicate test	+ve +ve +ve +ve -ve	+ve +ve +ve +ve -ve
4)	Test for Carbohydrate a)Molischs test b)Barfoeds test c)Benedicts test d)Fehlings test	+ve +ve +ve -ve	+ve +ve +ve -ve
5)	Tests for Saponins a)Foam test b)Heamolysis	+ve +ve	+ve +ve
6)	Test for resins	-ve	+ve
7)	Test for Flavonoids a)Shinoda b)Zn-Hcl Reduction c)Lead acetate d)BromineH ₂ O	+ve +ve +ve +ve	+ve +ve +ve +ve
8)	Test for Urea	+ve	+ve

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