



## STUDY ON EFFICACY OF DARANA KARMA IN 'PAKVA VIDHRDHI'

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## ABSTRACT

Vidhrdhi or Pyogenic abscess is a common entity comes across in day to day life. It presents as a localized swelling with pain, reddish discoloration, local rise of temperature, tenderness and restricted function of the affected part. There will be an invasion of pathogenic micro-organisms and it got the tendency of suppuration. When the pus has been collected, then the mandatory surgical intervention has been mentioned both in Ayurveda as well as contemporary science in order to drain the pus. But sharp instrumentation is the dread factor for the patients and is difficult to handle in vital locations such as axilla groin, neck etc. Darana karma is one among Shasti upakrama described by Sushruta and is meant for this kind of situations only. It is the application of Teekshna dravyas over the suppurated abscess in order to open the pus cavity to facilitate the drainage of pus. Pratisaraneeya Ksharas are considered as best Darana dravyas. A clinical study was conducted in 20 patients of Pakva Vidhrdhi which are subjected to Darana karma by selecting Kshara as a choice of drug. Application of Kshara to a great extent helps to break the pus cavity and drainage of pus due its Bhedana, Darana, Shoshana, Shodhana etc properties. It showed the high significant difference from baseline in all variables ( $p < 0.001$ ) both statistically and clinically. It is a simple, cost effective, OPD procedure which gives considerable result in draining the pus from the suppurated pyogenic abscess and to sustain the non infective state of the wound.

**Keywords:** Pakva Vidhrdhi, Pyogenic abscess, Darana karma, Pratisaraneeya Kshara, Pus.

## INTRODUCTION

Vidhrdhi is a localised painful condition shows all the features of Vrana shotha with dominance of Pitta. It has got the property of suppuration. Excessive intake of Katu, Amla, Vidahi foods such as fried food, chilies, spicy, undue consumption of alcohol, tobacco, beverages, smoking etc and improper living style are responsible for this condition<sup>1</sup>. Due to these factors there will be vitiation of Pitta and Rakta. These are settled in Tvacha, Mamsa, Meda, Asthi etc. and produces swelling of deep or broad root with bulging from the root. There will be severe pain with tendency of early suppuration. The pathological stages of the Vidhrdhi are same that of Vrana shotha and shows similar clinical features with the addition of rapid suppuration<sup>2</sup>. Vidhrdhis are nothing but abscess. An abscess is a cavity filled with pus and lined by a pyogenic membrane<sup>3</sup>. In this condition the suppurative infective organisms enters into the body via penetrating wounds, local extension from an adjacent focus of infection, lymphatics or bloodstream. There will be features of acute inflammation which include local swelling with pain, rise of temperature, and reddish discoloration with restricted function of affected part<sup>4</sup>. Both in Ayurveda as well as modern medical science describe same treatment principle in the presence of pus. Sushruta told that by observing the stage of Vidhrdhi, in its Pakvavstha one should incise them at most prominent part for evacuation of dosha<sup>5</sup>. It is nothing but 'where there is pus let it out'. Even Charaka also has given prime importance for shastrakarma for Vrana shodhana purpose<sup>6</sup>. If the pus has been not drained in time it will lead to many complications such as sinus formation, spreading to adjacent structure and may become incurable. But the surgery or sharp instrumentation is always a fear factor in almost all the patients. Also it is very difficult in vital parts where the

nerves and vessels are complexly arranged such as axilla, inguinal region etc. In such situation Sushruta described Darana karma as a substitute for incision with shastras<sup>7</sup>. It comes under Shasti upakrama and included under Patana karma of Saptopakrama. It is nothing but application of Teekshna dravyas over suppurated abscess to achieve the spontaneous breakage of the pus cavity, so that it facilitate the easy drainage of pus. Sushruta mentioned different Darana dravyas such as Chirabilva, Agnimantha, Chitraka, Danti Kapotavit etc. Pratisaraneeya Kshara is considered as best Darana dravya because of its property as well as clinical efficacy<sup>8</sup>. Ksharas are alkaline substances can be defined as one which got the capability of removing the morbid doshas from the body rapidly. Sushruta praised the effect of Kshara so much that, it can replace Shastra Karma since it does the functions of Darana, Chedana, Bhedana, Lekhana, Shoshana, Vilayana karmas simultaneously without the help of Shastra. That is why it is considered as superior among shastras and anushastras. Any form of anesthesia is not necessary for this procedure. Here a clinical study was conducted in 20 patients of Pakva Vidhrdhi with application of Apamarga Teekshna pratisaraneeya kshara and its significance was statistically analyzed.

## MATERIALS AND METHODS

## Sample source

20 patients diagnosed as Pakva Vidhrdhi was taken from Alva's Ayurveda Hospital, Moodbidri, India irrespective of their sex, religion, socioeconomic status, occupation etc. Each patient was selected for the trial after voluntary consent. Institutional Ethical Committee Clearance No: CEC/ AAMC /2013/41

**Diagnostic criteria**

- Swelling
- Pain
- Tenderness
- Reddish discoloration
- Local rise of temperature
- Fluctuation test

**Inclusion criteria**

- Patients of the age group between 20-60 years.
- Patients with classical features of Pakva Vidhrdhi
- Superficial abscess

**Exclusion criteria**

- Patients with systemic diseases such as Diabetes, HIV, Leprosy, Tuberculosis etc.
- Pyaemic abscess, Cold abscess, Cellulites, Carbuncle.
- Osteomyelitic abscess, Breast abscess, Parotid gland abscess etc.
- Deep seated abscess and non suppurated abscess.

**Special Investigations**

Hb%, TC, DC, CT, BT, RBS.

**Intervention**

Total treatment duration is of 5 days and follow up was done on 10<sup>th</sup> day.

**Preparation of Teekshna Pratisaraneeya Kshara**

Well grown Apamarga (whole plant) was collected and dried under sun shade. It was burnt into ashes. The ash was collected (1 part) and mixed with six parts of water and stirred well, allowed to settle overnight. Then it was filtered through double folded cloth for 21 times, residue was thrown out. Amber colored (Cows urine color) filtrate was obtained. This was boiled on sim fire in an iron vessel. When the content was reduced to half, about 1/3 of Kshara jala was taken out of the vessel. 1/10<sup>th</sup> of the ash quantity, Shukti was taken and heated red hot and then mixed with Kshara jala to

dissolve it completely. Thus dissolved Shukti was added to boiling Kshara jala (Avapa) and continued the boiling. Meanwhile 1/100<sup>th</sup> of ash quantity, Chitrakamoola and Vacha kalka were added to the boiling Kshara jala (Prativapa). When the content attained semisolid consistency it was withdrawn from the fire and stored in a container. This is Teekshna Pratisaraneeya Kshara. It is dull white in color and its pH is 13.0.

**Procedure**

The Pakva Vidhrdhi was cleaned well with antiseptic lotion. The surface was gently scraped with serrated surface of scoop. Then Pratisaraneeya Kshara was applied over the abscess starting from most prominent part towards the periphery. Waited for 100 matrakala (approximately 1 minute). In that time the pus cavity has been opened and pus starts to drain. Then Kshara has been wiped off and the area was washed with lemon juice. After application of Kshara if pus cavity not opens spontaneously, then the prominent area was slightly pressed in order to open. Even if does not open, then the procedure was repeated once more. The abscess was squeezed from all directions towards the mouth and drained all the pus from the cavity. Afterwards saline wash has been given. Then the cavity was packed with gauze which was rinsed in Jatyadi taila and dressing was done. Pus sample was collected and sent for culture as a part of academic pursuit. Packing was removed on the next day and dressing was done with application of Jatyadi taila. Dressing was changed every day. In large abscess packing was continued till filling of the cavity. Tablet Triphala guggulu and Gandhaka rasayana were given to every patient in the dosage of 1 tid. Analgesics were given according to the requirement.

**Assessment**

Clinical assessment was done on every day till the complete healing and the data obtained was analyzed using paired student's t-test. Gradings were given for every clinical feature. (Table 1)

**Table 1: Grading for different clinical features**

Swelling	Pain	Local rise of temperature	Tenderness	Reddish discoloration	Fluctuation
0-no swelling 1-1-3 cm 2-4-6 cm 3-7-9 cm 4-10 cm and above	0-no pain 1-mild pain only during movement of part 2-mild recurrent aching pain 3-moderate aching pain continuously 4- severe aching pain continuously	0- absent 1-present	0-no tenderness 1-tenderness on palpation without grimace 2- tenderness on palpation with grimace 3-tenderness with withdrawal 4- tenderness with withdrawal for gentle touch	0-absent 1-present	0-negative 1-positive

**Table 2: Comparison of efficacy on 1st, 3rd and 5th day of treatment from baseline**

Variable	1 <sup>st</sup> Day After Treatment			3 <sup>rd</sup> Day After Treatment			5 <sup>th</sup> Day After treatment		
	MD ± SE	t-value	P-Value	MD ± SE	t-value	P-Value	MD ± SE	t-value	P-Value
Pain	3.15 ± 0.16	19.39	< 0.001	3.50 ± 0.16	21.10	< 0.001	3.60 ± 0.14	24.27	< 0.001
Swelling	1.70 ± 0.14	11.87	< 0.001	1.90 ± 0.17	10.44	< 0.001	1.95 ± 0.20	9.42	< 0.001
Tenderness	3.20 ± 0.16	19.12	< 0.001	3.25 ± 0.15	20.81	< 0.001	3.35 ± 0.14	22.91	< 0.001
Local rise of temperature	0.85 ± 0.07	10.64	< 0.001	0.95 ± 0.04	19.49	< 0.001	0.95 ± 0.04	19.49	< 0.001
Reddish discolor	0.80 ± 0.08	8.94	< 0.001	0.90 ± 0.06	13.41	< 0.001	0.90 ± 0.06	13.41	< 0.001
Fluctuation	0.95 ± 0.04	19.49	< 0.001	0.95 ± 0.04	19.49	< 0.001	0.90 ± 0.04	19.49	< 0.001

MD- Mean Difference, SE-Standard Error

Table 3: Showing Overall result of treatment

Overall effect of the treatment	No. of patients	Percentage of relief
Markedly Improved, 75- 100 % Relief	18	90 %
Moderately Improved, 50-74.99 % Relief	2	10 %
Mild Improvement, 25-49.99 % Relief	0	0 %
No Change, < 24.99 % Relief	0	0 %

Table 4: Demographic profile of 20 patients

Age in years		Gender		Nature of work		Location	
21-30 Years	06 (30 %)	Male	15 (75 %)	Student	03 (10 %)	Axilla	04 (20 %)
31-40 Years	07 (35 %)	Female	05 (25 %)	Sedentary	05 (25 %)	Gluteal	03 (15 %)
41-50 Years	04 (20 %)			Physical work	10 (50 %)	Extremities	06 (30 %)
51-60 Years	03 (15 %)			House wife	02 (10 %)	Ischio-rectal	05 (25 %)
						Scrotum	02 (10 %)

## RESULT

After the application of Kshara in 60 % of the cases spontaneously pus cavity has been opened and facilitated the drainage of pus. In 20 % of the patients required slight squeezing at most prominent part. Remaining 20 % of patients required second time application of kshara to break the pus cavity. In all the cases there was a rapid decline in the pain, tenderness, size of swelling after the procedure and which was highly significant both clinically as well as statistically ( $p < 0.001$ ). The mean difference and standard error has been explained in Table 2. It was observed that next day itself there was a complete detachment of necrosed and the devitalized tissues and ulcer was healthy without any discharge and slough. After application of Kshara the patients complained burning sensation over the abscess area, but it was tolerable. There was an immediate shrink of the skin over the abscess after application of Kshara. There was insignificant post operative pain seen in the wound. The overall effect of treatment has been described in Table 3.

## DISCUSSION

Based on the demographic profile (Table 4) it is observed that Vidhrdhi is prevalent in life period 20 to 40 years in males (75 %) and are specially exposed to physical work (80 %) and consumes spicy food routinely. Location wise incidence shows more fleshy areas like Gluteal, extremity etc. Application of Kshara showed a high efficacy in immediate reduction of swelling, pain and tenderness by evacuating the pus from the abscess cavity, which was highly significant ( $p < 0.001$ ). Here Shoshana property of Kshara may be helped for shrinking the size of the swelling. Moreover the Bhedana, Darana and Vilayana property of Kshara helped for evacuating the pus and it instantaneously reduces the intra abscess pressure and significantly relieves the pain and tenderness. The Teekshna and Ushna property of Kshara helps to break the pus locules inside the pyogenic membrane and helps for easy drainage of pus. Krimighna and Ropana property of the Kshara is also considered with equal importance as it helps to dissolve the infective organism and early healing of the ulcer. In post operative period Jatyadi taila helped for removing the remnant doshas and enhanced healing.

## CONCLUSION

Vidhrdhi or abscess is a common painful condition can occur in any parts of the body. It has got the tendency of suppuration. The treatment choice is incision and drainage. But instrumentation is always allergic to the patients and also it is difficult in some vital places like axilla, groin etc. Darana karma is the choice of treatment in such situations which substitutes the Bhedana karma with shastras. Pratisaraneeya Kshara is considered as best Darana dravya and its application over the Pakva Vidhrdhi helps to break the pus cavity and facilitates the drainage of pus. It also removes necrosed and devitalized tissues from the abscess and helps in early healing of the ulcer. It is a simple, safe, effective OPD level procedure and one can do without the use of any form of anesthesia. This procedure is cost effective as well.

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