



Case Study

ROLE OF SHATADHAUTA GHRITA AND MEDICATED GHEE BASED NON-ADHERENT DRESSING WITH YASHAD BHASMA IN THE MANAGEMENT OF DUR-DAGDHA VRANA/SCALDS BURN (SECOND DEGREE BURN)

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ABSTRACT

A case of 3-years old child presented with complaints of blister over the anteromedial aspect of the left ankle and over the dorsum aspect of left foot due to scalds burn by fall of hot curry 1 day ago. In Ayurveda, *Dagdha Vrana* explained in *Sushruta Samhita* with details regarding classification, clinical features and detailed management according to types, therapeutic burns also have been described in *Sutra Sthana "Agnikarma Vidhi Adhyaya"*. **Aim and objectives:** To see the role of *Shatadhauta Ghrita* and medicated Ghee based non-adherent dressing with *Yashad Bhasma* in the management of *Dur-Dagdha Vrana* (scalds burn). **Material and methods:** *Shatadhauta Ghrita* external application followed by medicated Ghee based non-adherent dressing with *Yashad Bhasma* over the *Dur-Dagdha Vrana* site for 10 days once a day. **Results:** There was complete cure of the *Dur-Dagdha Vrana* within 10 days of treatment. **Conclusion:** In current case, *Shatadhauta Ghrita* application due to its *Pitta-Vatahara, Vrana Shodhana, Vrana Ropana, Daha Prashamana* and *Vedanasthapana* properties helps to reduce the burning sensation and pain over the *Dur-Dagdha Vrana* site. Medicated ghee based non-adherent dressing with *Yashad Bhasma* helps in *Vrana Shodhana* and *Vrana Ropana* (healing).

INTRODUCTION

Dagdha Vrana detailed explained in the *Sushruta Samhita* in *Sutra Sthana "Agnikarma Vidhi Adhyaya"*^[1]. Acharya *Sushruta* explains the *Lakshana*, types and *Chikitsa* of *Dagdha Vrana* according the types, *Sushruta Acharya* classified as *Snigdha* and *Ruksha*. *Dagdha* is caused by heat that is either produced by *Ruksha* or *Snigdha* substances. Because *Sneha Dravyas* have the ability to penetrate minute pores, they result in deeper, more severe burns. This makes burns caused by *Snigdha Dravyas* more excruciating. Further 4 types of *Dagdha Vrana* according to *Sushruta Acharya* *Plusta Dagdha, Durdagdha, Samyak Dagdha, Atidagdha. Plusta Dagdha* (1st degree burns) is discoloration of the skin of affected part along with burning sensation.

According to *Dalhanacharya, Plusta Dagdha*- rather than *Spotha*- is the source of discoloration and *Daha*.

In current study, *Shatadhauta Ghrita*^[2] external application followed by medicated ghee based non-adherent dressing with *Yashad Bhasma* over the *Dur-Dagdha Vrana* site for 10 days once a day.

Durdagdha (2nd degree burns) burns presenting with blisters, and different types of pain, burning, redness, inflammation and takes a long time to subside. *Samyak Dagdha* are burns which are neither deeply seated nor superficial and having the color of *Tala Phala* (Asian palm fruit), Tissues will be in their own site. *Atidagdha* is the injury affecting the whole tissue as skin subcutaneous tissue, muscles, vessels, tendons, ligaments and exposing to other deeper structure and having symptoms of *Jwara* (high grade fever), *Daha* (burning pain), *Pipasa* (increase thirst), features of dehydration. The wound healing delayed with *Vivrana* (discoloration of affected part) even after healing. The condition is correlated to advanced 3rd degree and 4th degree burn^[3].

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A burn is a wound where the tissue has undergone coagulative necrosis. Burns can also be induced by hot liquids, fire, sunlight, electricity, radiation, or chemicals, which can cause harm to the surface or deeper tissues^[4].

Burn injuries are of 5 types according to modern thermal burn injuries, electrical burn injuries, chemical burn injuries, radiation burn injuries and cold burn injuries.

Thermal burns from dry sources (fire or flame) and wet sources (scalds) account for approximately 80% of all reported burns^[5] and can be classified based on the depth of burn^[6].

Scalds burn is a type of thermal injuries is more common in the children under 8 years of age, usually from the spilling of hot liquids. The most common cause of burned injuries is hot liquid spills that are over 65°C in temperature. In just three seconds of contact, it can produce a deep, partial- or full-thickness burn. If the temperature is about 70°C, the same burn happens in one second.

According to *Bhavapraksha, Sushruta, Charaka* and almost all *Acharya Shatadhautha Ghrita* is good for *Vrana Ropana* (healing), complexion, voice and in *Kshatakshina, Visarpa, toxins, Unmada* etc. *Shatadhautha Ghrita* washed cow ghee 100 time with water (*Shata* - one hundred, *Dhauta* = washed). Traditional texts mention it for treating burns, chicken pox, scars, wounds, herpes, leprosy, and other skin diseases, as well as a vehicle for drugs to be applied externally^[8].

Case Report

3 years of child was apparently healthy 1 day ago, presented with complaint of blisters over the antero-medial aspect of left ankle joint and over the dorsum aspect of the left foot due to burn by fall of hot curry associated with pain, itching, and burning sensation. Blister size increased gradually since 1 day.

Poorva Vyadhi Vrittanta (History of Past illness)

Patient was not a known case of congenital abnormalities and attained all developmental milestones without any delay.

Chikitsa Vrittanta (Treatment History)

Patient consulted in a local hospital and took some pain killer and got symptomatic relief.

Vaikthika Vrittanta (Personal History)

- Diet: Mixed
- Appetite: Good
- Bowel: Regular, once a day
- Micturition: 5-6 times/day
- Sleep: Disturbed due to pain and burning sensation

Samanaya Pareeksha (General Examination)

- Built: Moderate
- General condition: Fair

- Nutritional status: Moderate nourished
- Pallor: Absent
- Icterus: Absent
- Cyanosis: Absent
- Clubbing: Absent
- Lymphadenopathy: Absent
- Oedema: Present

Samanaya Pareeksha (Vitals)

- Pulse rate: 110 bpm, regular
- Respiratory rate: 20/min
- Temperature: 97.4°F

Samsthanika Pareeksha (Systemic Examination)

1. CNS: Conscious, well oriented to time, place and person
2. CVS: S1S2 heard, no murmur sound present
3. RS: Equal air entry to B/L lung fields, Normal vesicular breath sounds present, no added sound present
4. P/A: Soft, non-tender, no organomegaly present

Sthanika pareeksha (Local Examination of wound)

- Anatomical location – One blister around antero-medial aspect of left ankle and one at the dorsum aspect of the left foot
- Shape and size - Both blister are oval in shape, size measures are 10x4 cm and 6x4 cm respectively
- Number – 2 Blisters
- Position – One around antero-medial aspect of left ankle (*Vama Gulpha Sandhi*) and one at the dorsum aspect of the left foot
- Degree of burns – Second degree
- Percentage of burns - 2% of total body surface according to pediatric burn guidelines.

Sparshana (Palpation)

- Tenderness - Present
- Peripheral pulsations - Palpable
- Inguinal lymph nodes – Not Palpable

Prayoga shala pareeksha (Investigations)

- Hb – 11.0 gm%
- Total W.B.C count – 13,500 cells/cmm
- ESR – 04mm/ hr
- RBS – 98.6 mg/dl
- Blood urea – 23.7mg/dl
- Serum creatinine – 0.6mg/dl
- Sodium -143.3mg/dl
- Potassium – 4.0mg/dl
- Chloride – 108.8mg/dl
- HIV, Hepatitis- B surface antigen non-reactive

Vyadhi vinischaya (Diagnosis)

- Dur-Dagdha Vrana/second degree burns 2%/scalds burn injury

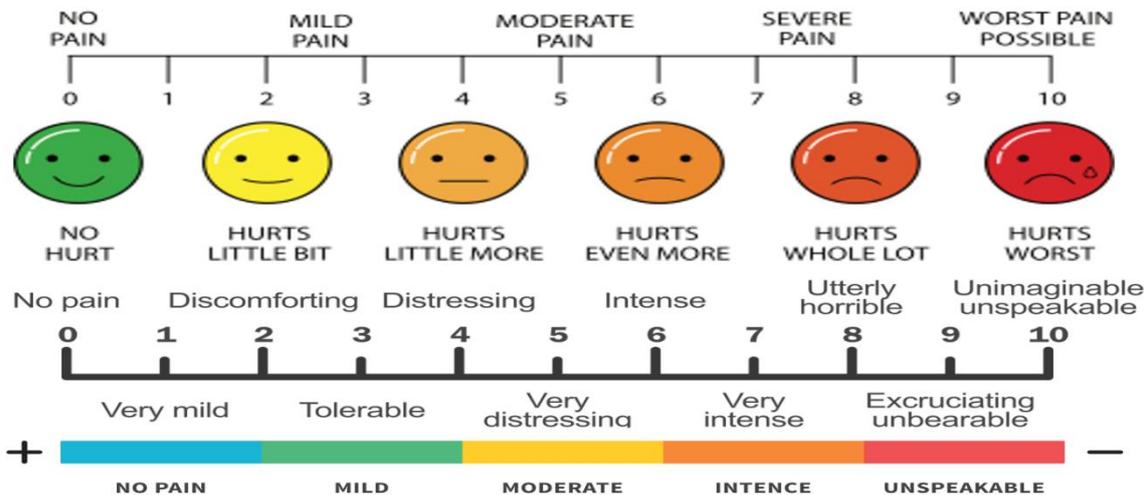
Procedure

1. Vishravana and Chedana Karma (drainage & excision)
2. Written consent was taken
3. The patient was made in supine position

4. Burn blister site cleaned with normal saline.
5. Blister opened and drained and dead skin excised.
6. Dagdha Vrana site cleaned with normal saline.
7. Shatadhauta Ghrita applied over wound site followed by medicated ghee based non-adherent dressing with Yashad Bhasma for daily once for 10 days.

Gradation/ Criteria for Assessment of Parameters

Pain - VAS (Visual Analogue Scale)



Burning Sensation

- Grade 0 - Nil
- Grade 1 - Mild
- Grade 2 - Moderate
- Grade 4 - Severe

Discharge

- Grade 0 - Absent
- Grade 1 - Present

OBSERVATIONS

S.no.	Criterion	Before Treatment	5 th day	10 th day After Treatment
1	Pain	6-8 (very intense)	4-5 (moderate)	0
2	Burning sensation	3 (severe)	2 (moderate)	0
3	Discharge	Absent	Present	0
4	Wound healing	1 blisters present over the antero-medial aspect of left ankle joint and 1 over the dorsum aspect of the foot	Healing with granulation tissue	Healing without contracture formation

RESULTS

1. Pain and burning sensation reduced 20% after 2 days draining of blister and dead skin excision
2. 70-80% burning sensation and pain reduced on 5th day.
3. 90-95% burning sensation and pain reduced on 10th day.
4. Patient is able to walk and run properly without any limping.
5. No discomfort while dressing from 4th day onwards.
6. Normal pigmentation of the healed skin seen in 90% of burn.

<p>Day 1</p>			
<p>Day 2 <i>Shatadhautha Ghrita</i> application</p>			
<p>Day 5</p>			
<p>Medicated Ghee based non-adherent dressing with Yashad Bhasma</p>			
<p>Day 10</p>			

DISCUSSION

Shatadhauta Ghrita Samskara is a pharmaceuticals procedure that induces therapeutic properties, increasing the potency and bioavailability of the drugs involved. *Samskaro hi naama Gunantaradhanam Uchyate*. The methods by which the properties like *Rasa, Guna, Virya, Vipaka, undergo "Gunantaradhaanam"* i.e., the changing of *Sthoola Guna* (macro form) to *Sukshma Guna* (micro form)^[7]. *Shatadhautha Ghrita* having *Vrana Shodhana, Vrana Ropana, Daha Prashamana* and *Vedanasthapana* properties *Shatadhautha Ghrita* contain beta carotene and vitamins, including vitamin A and vitamin E is anti-oxidants and is helping in reducing ketones bodies, helpful in preventing oxidative injury to the body. Vitamin A keeps epithelial tissue of the body intact. It contains approximately 8% lower saturated fatty acids, which promote proper growth. The melting point of the *Ghrita* is 35°Celsius which is less than the human body. Cell membrane contain lipid, *Ghrita* is lipophilic action facilitates transportation to a target organ and final delivery with cells and delivery to the mitochondria microsome and nuclear membrane.

Medicated ghee based non-adherent dressing with *Yashad Bhasma* contains ingredients *Neem (Azadiracta indica), Katuki (Picrorhiza kurroa), Nisha (Curcuma Longa), Vata (Ficus benghalensis), Udumabar (Ficus glomerata), Plaksha (Ficus infectoria), Ashwatha (Ficus religiosa), Mahuyasthi (Glycrrhiza glabra), Yashad Bhasma 0.5% w/w, Sarpi Sesame oil q.s.* are having *Vrana Shodhana* and *Vrana Ropana* properties. Ghee based non-adherent property will allow to change dressing once in day due to its sustain release of medication having greater penetration through epidermal barrier to enhance the wound healing activity of drug which helps in minimum inflammation, faster epithelialization and vascularization.

CONCLUSION

Shatadhauta Ghrita resulted in reduction in *Daha Prashamana* (burning sensation) and helps in

healing of *Dagdha Vrana* by its *Vrana Shodhana, Vrana Ropana, and Vedanasthapana* and medicated Ghee based non-adherent dressing with *Yashad Bhasma* because of its sustain release of medication helps in *Vrana Shodhana* and *Vrana Ropana*

Thus it can concluded that *Shatadhauta Ghrita* and medicated ghee based non-adherent dressing with *Yashad Bhasma* externally is more effective in *Dagdha Vrana* by its *Vrana Shodhana, Vrana Ropana, Daha Prashamana* and *Vedanasthapana* properties.

REFERENCES

1. Susruta, Susruta Samhita Vol-1 (Suthrasthana), English translation by Srikantamurthy. 1st ed., Varanasi; Chaukambha visvabharati; 2018. p.71.
2. Mishra Aacharya Siddhanand, Bhaishajya kalpanavidnyan, (Chokhamba Surbharati Prakashan), 2001, 221-235, 301-302.
3. Susruta, Susruta Samhita Vol-1 (Suthrasthana), English translation by Srikanta murthy. 1st ed., Varanasi; Chaukambha visvabharati; 2018.p.73.
4. Sriram Bhat M. SRB's Manual of Surgery. Burns: chapter 1[i]. 4th ed., New Delhi: Jaypee Brothers Medical Publishers; 2013. p. 128.
5. American Burn Association. National Burn Repository 2014. Available from: <http://www.ameriburn.org/2014NBRAnnualReport.pdf>.
6. Kagan RJ, Peck MD, Ahrenholz DH, Hickerson WL, Holmes J, Korentager R, et al. Surgical management of the burn wound and use of skin substitutes: an expert panel white paper. J Burn Care Res. 2013; 34:e60-79.doi: 10.1097/BCR.0b013e31827039a6.
7. Acharya S.N. Mishra, Abhinava Bhaishajya kalpanavijnana 4th edition, Chaukhamba Subharti Prakashana; 1993. p. 301-302.
8. Chauhan RS. Panchgavya therapy (Cowpathy): current status and future directions. Indian Cow Sci Econ J 2004; 1: 3-7.

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