

# A Case Study on Electric Burn: An Ayurvedic Approach

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**Abstract:-** The electric burns are commonest causes for physical burns in the clinical practice. A patient approached with electric burns of second degree with severe pain even after treated with modern medications. The ayurvedic approach towards the burns as per acharya sushruta and other classical references has been considered in the treatment. Shatadhouta ghritha<sup>1</sup>, Triphala churna, Triphala guggulu, Mahamanjistadi kasaya played a very effective role in curing the burns without any complications.

**Keywords:-** Burn, Dagdha Vrana, Inflammation, Vata, Rakta.

## I. INTRODUCTION

### A. Patient History

- Patient Name: Chandra.M
- Age: 56 years
- Sex: male
- Occupation: MESCOM worker
- Place: Mysore
- Opd No: 16020
- Socio-economical status: middle class
- **Chief Complaints:** Burn over left palm, and all the five fingers of left hand since one week associated with severe pain, blackish discoloration of affected area and unable to flex all the fingers.
- **Associated Complaints:** burning sensation since one week.
- **History of Present Illness:** patient has been said to be apparently healthy before one week. The next day when he went to repair the electric grid with the bare hands, as his routine departmental electric work he received accidental severe electric shock to the left hand. As a result, he developed electric burn over the left hand with severe pain, swelling, formation of blister, and burning sensation in the palm and fingers. For which he consulted the local physician at Mysore. He was given Injection TT, and antibiotics for 3 days but there was no relief even after 1 week. Then patient consulted our hospital for above said complaints.

- **History of Past Illness:** K/C of DM since 6 years and is under modern medications. No prior surgeries, blood transfusions are done.
- **Family History:** No significant history
- **Treatment History:** Took antibiotics, injection TT, and soframycin ointment for external application for burn. Tablet Glycomet 500mg 1 BD for DM.

### • Personal History

- ✓ Appetite - Normal
- ✓ Bowel - Normal
- ✓ Maturation - Normal
- ✓ Sleep - disturbed
- ✓ Habits – Nil
- ✓ Negative history: no loss of consciousness, no syncope or shock during the electric shock. No fever.

## II. CLINICAL EXAMINATION

### ➤ Vital Data:

- B.P – 130/80 mm of Hg
- Pulse – 80/min, regular.
- R.R – 18/min
- Temp – 98.7 F

### ➤ General Examination –

- Pallor – absent
- Icterus – absent
- Clubbing – absent
- Cyanosis – absent
- Kylonychia – absent
- Lymphadenopathy – absent
- Oedema – absent

### ➤ Systemic Examination

- Cardiovascular system – S1, S2 heard, no added sound
- Respiratory system – Bilateral elliptical, AEBE, no added sound
- Nervous system –
- HMF – normal
- Cranial nerves – normal
- Motor system – normal

- Sensory system – normal
- Reflexes – normal
- Involuntary movements – absent
- Musculoskeletal system – second degree burn (deep) in left palm including all fingers of left hand
- ROM – reduced in left all fingers

### III. INTUGUMETARY SYSTEM

#### ➤ Local Examination

- Second degree burn (deep) over left palm and all fingers of left hand.
- Blister – present (size 1.5cm x 1 cm)
- Tenderness – present
- Warmth – increased
- Weeping of fluid – present
- Sloughing of skin – present
- Burn calculation (Wallace rule of 9) – 0.5 %
- Psychiatric – slightly depressed and worried due to pain.
- Assessment of pain (numerical and behavioral assessment scale) – 4 (Moderate pain)

#### ➤ Treatment Given

Table 1: Internal Medication

Sl. No	Name Of Drug/Medicine	Dosage /Usage	Duration
01	Mahamanjistadi kasaya	15ml tid before food with warm water	15 days
02	Saari vadyasav	10ml tid with water	10days
03	Tablet Triphala guggulu	1 tid	15 days
04	Tablet Gandhaka rasayana	1 tid	15 days
05	Capsule Grab	1 tid	15 days

Table 2: External Therapy

Sl. No	Name Of Drug/Medicine	Dosage /Usage	Duration
01	Triphala churna	QS,used for pariseka twice a day	15 days
02	Shatadoutha ghritha	QS,used for external application twice a day	15 days

### IV. RESULTS

Table 3: Results

Sl.No	Clinical Features	Before Treatment	After Treatment	Duration
01	pain	Grade 4(moderate pain) N&B scale	Grade0( no pain) N&B scale	10days
02	Tenderness	present	Absent	13days
03	Blister	present (size 1.5cm x 1 cm)	Absent	2 days
04	Weeping of fluid	present	Absent	7 days
05	Sloughing of skin	present	Absent	10 days
06	Burn calculation (rule of 9)	Present 0.5%	00	15days
07	ROM of affected fingers	Reduced	Normal	15days

#### ➤ Images



Fig 1: Before Treatment



Fig 2: After Treatment

## V. DISCUSSION

Electric burns can be caused by different sources either natural or artificially influenced but acharya sushruta mentioned these under vidhyadhashanikruta vyadhi under daivabala pravrutta vyadhi<sup>2</sup> (adidavika vyadhi) caused by the electric shock of lightening and also in the parasurgical treatment like agni karma. As it is mentioned under the daivabala pravrutta vyadhi obviously it is not under human control except some precautions and preventions taken.

The extent of burn is assessed clinically by rule of 9 or based on degree of burn. (extent of tissue damage) Similarly in ayurveda it is assessed by involvement of twakadi dhatus. As it comes under the aguntaja vyadhi (external source for the disease) there is involvement of vata dosa and vitiation of rakta an also there is involvement of rasa dhatu or twak. Further there can be involvement of mamsadi dhatus or sira snayu khandara depending on the intensity of burn. Association of rasavaha srotus, raktavaha srotus is common in any type of burn. Sroto dusti prakara like sanga, atipravrutti, vimargagamana, and sira granthi are involved in this, depending on - the extent, severity, and progression of the disease.

There is no specific purvarupa explained for the dagda vrana or burns as the clinical features of purvarupa are submerged with clinical features of roopa and hence it is very difficult to differentiate the purvaroopa and roopa.

The treatment planned here is triphala kwatha pariseka followed by external application of shatadhouta ghritha. Triphala kwatha pariseka has tridosha hara, vrana shodaka, vrana ropana effect hence it reduces pain and swelling by reducing the local inflammation. Triphala kwatha contains the drugs like haritaki, vibhitaki and amalaki which when combined shows anti-inflammatory property. It also helps in removing the debris, slough which is produced by dead tissues and therefore helping in the quick generation of the new cells.

Usage of shatadhouta ghritha is very useful in the burns as the method of preparation is to wash the go-ghritha (cow grita) for 100 times in the copper vessel in the day of full moon. The washing technique in the copper vessel aids the presence of microparticles of copper in to ghritha. So this microparticles of copper will help in the synthesis of elastin and collagen, thereby improving the elasticity of skin, strengthening the skin and reducing the stiffness and also wrinkling of skin. Copper has antioxidant and antibacterial action, therefore helping in the prevention and curing of primary or secondary infection and reducing the chances of further spread of infection. As the name of ghritha suggests, it is washed 100 times to remove the impurities of ghritha and add on samskara. It contains omega 3,9 fatty acids, vitamin A,D,E,K which are very much beneficial for the health of normal skin<sup>3</sup>. So when applied externally, it provides and maintains the good health of a skin. The madhura rasa, sheeta veerya and snigdha guna present in this grita reduces pitta and vata dosha. Since it is having vatapittahara guna and sheetala prabhava induced by full moon it aids in reducing the pain and burning sensation. Tamra or copper is having Kashaya, Tikta, Amla and Madhura Rasa among which Madhura and Kashaya Rasa are dominant, usna virya, laghu, ruksha, tiksna guna hence able to pacify tridosha mainly pitta and kapha dosas. It is having vrana ropana (healing) and vrana lekhana (scraping and removing dead tissues) property which is useful in the wound healing process.

Mahamanjistadi kasaya is having the vatarakta hara action. As the burn or dagdha vrana is agantuja vyadhi, there is involvement of vata and rakta this kashaya aids in pacifying and correcting the prakupita vata and rakta. Since there is pacification of vata, there is reduction in the pain.

Sarivadyasava is used because it has the action of vatahara, pittahara and helps in altering the vitiation of vata and rakta. The pittahara property pacifies burning sensation. Vatahara property reduces the pain and it also helps in correction of raktavahasroto dusti<sup>5</sup>.

Triphala guggulu is having the shothahara property (anti-inflammatory effect) which helps in wound healing. It also reduces the pain, swelling because of its anti-inflammatory property<sup>6</sup>.

Gandhaka rasayana is having antibacterial, antiviral, antimicrobial, analgesic anti-inflammatory effect hence able to reduce pain, swelling, discharge and helpful in quick healing<sup>7</sup>.

Capsule Grab(green remedies) contains Vranapahari Rasa (Classical Prepn ) 100mg , Triphala Guggulu (Classical Prepn ) 300mg, Gandhaka Rasayana (Classical Prepn ) 75mg, Arogyavardhini Vati (Classical Prepn) 25mg, Guduchi(Tinospora cordifolia) Q.S., Manjistha(Rubia cordifolia) Q.S which has wound healing property, anti-inflammatory , analgesic, antimicrobial property thus helpful in wound healing<sup>8</sup>.

## VI. CONCLUSION

31% of people in India experienced and affected with electric shock.

Mortality and morbidity may vary according to severity and degree of burn. Acharya sushruta explained about burns and its treatment in detail. Causes of burns are natural, accidental, medico legal, therapeutical and according to ayurveda it is due to the effect of dhava,or therapeutical. The combination of rasa dhatu, rakta dhatu and vata dosa is usually involved in any type of burns. The clinical features categorized based on intensity of burn, and degree of burn involving the tissues. The treatment planned here is vatapittahara, and rasa,rakta ,mamsavaha srotodusti chikitsa.

## REFERENCES

- [1]. <https://timesofindia.indiatimes.com/life-style/health-fitness/health-news/powerful-benefits-of-100-times-Washed-ghee-shata-dhauta-ghrita>
- [2]. <https://www.easyayurveda.com/2016/08/22/classification-of-vyadhi-diseases-ayurveda/>
- [3]. <https://timesofindia.indiatimes.com/life-style/health-fitness/health-news/powerful-benefits-of-100-times-Washed-ghee-shata-dhauta-ghrita>
- [4]. <https://www.ayurvedinfo.com/2012/02/15/mahamanjishitadi-kashayam-benefits-dose-side-effects-ingredients-reference/>
- [5]. <https://www.ayurvedinfo.com/2012/02/09/sarivadyasava-uses-dose-side-effects-and-ingredients/>
- [6]. <https://www.easyayurveda.com/2010/02/08/triphaloguggulu-best-of-the-herbal-remedy-for-haemorrhoids-and-fistula-anorectal/>
- [7]. <https://www.ayurvedinfo.com/2012/07/21/gandhakarasayana-benefits-dosage-ingredients-side-effects/>
- [8]. <https://greenremediesindia.in/product/grab-tablets/>