



Review Article

CONCEPTUAL AND APPLIED ASPECT OF AGNIKARMA IN THE PURVIEW OF CAUTERIZATION

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ABSTRACT

In Ayurveda, *Shalyatantra* is one of the eminent branches based on six major methods of management among which *Agnikarma* is boon for local *Vata* and *Kaphaja Vyadhi*. Its effect can be assessed as *Sthanik Karma* (local action), *Saarvadaihik Karma* (Action throughout the body) and *Vishista Karma* (Special actions). Based on amount of *Agni* needed, the condition and site of disease, *Dahanupakarana* are used to produce therapeutic burns during *Agnikarma Chikitsa*. It can be classified according to *Dravya* used, site, disease, *Akriti* and *Dhatu* to be cauterized. Based on the *Dagdha* (Burn), it is again of four type viz. scorched burn, blistered burn, superficial burn and deep burn. Its indication is in all seasons except in summer and autumn. Indications and contraindications are well expounded in classics with detail information on *Purva Karma*, *Pradhana Karma* and *Paschat Karma* during *Agnikarma* as it is superior to every other procedure used in Ayurveda Surgery. In modern medicine, there is no use of therapeutical burn i.e., *Samyak Dagdha Chikitsa* but its use is in other form e.g., Cauterization is used for coagulation and tissue destruction. *Agnikarma* is considered as the best therapy to pacify *Kaphanubandha Vata Dosha* because *Agni* possesses *Ushna*, *Tikshna*, *Sukshma*, *Aashukari Gunas*, which have anti *Vataja* and anti *Kaphaja* properties. It is done by red hot *Shalaka*. It gives quick relief to the patient and hence is termed as best therapy.

KEYWORDS: *Agnikarma*, *Vata*, *Kapha*, *Dagdha*, Burn, *Karma*.

INTRODUCTION

Ayurveda, the most ancient medical science of the world, apprehends and describes the basis and applied aspect of life process, healthy being and disease with its management based on its own principles and methodologies.

In present era, the era of modern science, has been developing advance technology and therapeutics for the diagnosis and management of different disorders, still ancient system of medicine fulfill the health care needs of the vast majority of population. Globally, nowadays large segment of humanity is shifted towards natural way of life and they have lot of expectations from Ayurveda which is existing toxicity free and eco- friendly due to its holistic approach.

Shalyatantra is one of the eminent branches of Ayurveda based on six major methods of management such as *Bhesajkarma*, *Ksharakarma*, *Agnikarma*, *Shastrakarma*, *Yantrakarma* and *Raktamokshana*. *Agnikarma* is grander among them and boon for local *Vata* and *Kaphaja Vyadhi*^[1] as diseases treated by it do not recur and also gives

instant relief to the patients. There is no fear of complication such as petrification and bleeding due to contact with *Agni*. Different articles has been published which shows its great efficacy on sciatica,^[2] osteoarthritis,^[3] corn,^[4] frozen shoulders^[5] etc.

Agnikarma

Agni Vyutpatti

The word *Agni* is a masculine gender.^[6] The word *Agni* has been derived from the *Dhatu* "Agigatau".

"The word *Agni* is also derived from the *Dhatu* "Agatiyapnoti" which spreads very fast everywhere.

Niruktti

The word *Agni* is having two kind of *Niruktti* depending upon its *Swarupa* and *Swabhava*.^[7]

According to *Swarupa*- which spreads to various parts or organs, is called *Agni*.

According to *Swabhava*- which moves in upward direction, is called *Agni*.

We can club this statements and define it as "which spreads by moving upward is called *Agni*."

Karma Vyutpatti

The *Karma* is derived from the *Dhatu* 'Du Kriya Kri Karne' and formed as 'Karma'.

Nirukti- Which acts that is called as *Karma*.

Through which the action takes place is called *Karma*.^[8]

Agnikarma

The two words *Agni* and *Karma* combine to form a unique term or procedure i.e., *Agnikarma* which means "the action /*Karma* takes place by upward spreading nature of *Agni*". In texts there are different types of *Karma* have been explained viz. *Spandanda*, *Gamana* etc, but in present context it denotes only about procedure.^[9] In context of present study, the meaning of *Agnikarma* can be taken as a specific procedure done by the help of *Agni* for treating a disease.

Synonyms of Agnikarma

Agni Chikitsa
Agni Dagdha
Agnihotra
Agnikarma
Agni Karya
Dagdha karma
Dahakarma
Dahan karma
Jwala Karma
Paachan Karma
Tapana Karma
Vahni Dagdha

Agnikarma in Samhita period (Brihatrayee)

Regarding the *Agnikarma Chikitsa*, various references are available in the Ayurvedic literatures.

Charaka Samhita

Acharya Charaka explained the *Agnikarma Chikitsa* in the reference of *Shashtra Pranidhana*^[10]

- In *Dwivriyani Adhyaya Chikitsa* as a treatment of *Vrana*.^[11]
- In reference of treatment of *Mansaja Roga* in *Vividhashitapitiya Adhyaya*.^[12]
- In *Gulma Chikitsa*, at reference of *Kaphaja Gulma*.^[13]
- In *Shvayathu Chikitsa*, in reference of *Granthi Roga* and *Bhagandara Chikitsa*.^[14]
- In *Udara Chikitsa*, in reference of *Pleehodara Roga* and *Yakritodara Chikitsa*.^[15]
- In *Arsha Chikitsa*, in reference of *Arshashastra Karma*, *Kshara Karma* and *Agnikarma*.^[16]
- In *Visarpa Chikitsa*, in reference of *Granthi Visarpa Chikitsa*.^[17]

- In *Visha Chikitsa*, in reference of *Visha Vega Chikitsa*.^[18]
- In *Vatavyadhi Chikitsa*, in reference of *Gridhrasi Roga Chikitsa*.^[19]
- In *Siddhistan*, in context of *Trimarmiya Chikitsa* and in reference of *Ardhavabhedaka Roga Chikitsa*.^[20]

Sushruta Samhita

Many references are available in *Sushruta Samhita* regarding *Agnikarma* which are as follows-

In *Sutrasthana*, in context of *Yantravidhi Adhyaya* as an *Upayantra*.^[21]

A detailed *Agnikarma Vidhi Adhyaya* has described separately.^[22]

In *Pranasta Shalya Vigyaniya Adhyaya* as a *Shalyaniraharana Viddhi*.^[23]

In *Vatavyadhi Chikitsa*, in reference of *Sira*, *Snayu*, *Sandhi*, *Asthigat Vyadhi*.^[24]

In *Arsha Roga Chikitsa*.^[25]

In *Ashmari Chikitsa*, for management of *Vrana*.^[26]

In *Bhagandara Chikitsa*, for management of *Vrana*.^[27]

In reference of *Granthiapachaya Arbuda Chikitsa*.^[28]

In reference of *Vridhiupadhansha Chikitsa*.^[29]

In *Kshudra Roga Chikitsa*.^[30]

In the context of *Mukha Roga Chikitsa*.^[31]

In *Sushruta Kalpasthana*, in reference of *Sarpa Visha Chikitsa*.^[32]

In *Sushruta Uttartantra*^[33] and one of 60 *Upakarma of Vrana*.^[34]

Ashtanga Samgraha

In *Sutrasthan* 40 descriptions of *Agnikarma Viddhi* along with many other references of other diseases where *Agnikarma Chikitsa* is indicated may be seen there.

Ashtanga Hridaya

A. H. Su.30 deals with *Agnikarma Viddhi* and there are many other references of *Agnikarma Chikitsa* indicated in different diseases.

Types

In '*Shushrut Samhita*', the description per *Dalhana* regarding *Agnikarma* is as below

1. "*Agni Krita Karma*"- the *Karma*/action done/ carried out by *Agni* i.e., the *Agni* is used directly or direct manner application of *Agni*.

2. '*Agni Sambandhi Karma*'- the *Karma* or action related to *Agni* i.e., the *Agni* related things/media are used or indirect manner of application of '*Agni*'.

So, the identical character in both the statements is the presence of *Agni*, whether it is used directly or indirectly through media.

Effects

Hence, the effect of *Agnikarma* can be assessed as-

1. *Sthanik Karma*- local action.
2. *Saardvaihih Karma*- Action takes place all over the body.
3. *Vishista Karma*- Special kind of actions.

***Dahanupakarana*^[35-37] (Instruments for *Agnikarma*)**

Dahanupakarana are the instruments to produce therapeutic burns (*Samyaka Dagdha*) during *Agnikarma Chikitsa* as each of them is having their own peculiarity in *Dahnopakarana*. They are classified as follows according to various *Acharyas*.

S.N.	Name of <i>Dahnopakarana</i>	<i>Charaka Samhita</i> ^[38]	<i>Sushruta Samhita</i> ^[39,40]	<i>Astanga Sangraha</i> ^[41]	<i>Astanga Hridaya</i> ^[42,43]
1.	<i>Aja Shakrida</i> (Goat Excreta)	-	+	+	-
2.	<i>Ardhendu Vaktra Shalaka</i>	-	+	+	+
3.	<i>Ghrita</i>	+	+	+	+
4.	<i>Godanta</i>	-	+	+	+
5.	<i>Hema</i> (Gold)	+	-	+	-
6.	Jaggery	-	+	+	+
7.	<i>Kalasthidil Tulya Shalaka</i>	-	+	+	+
8.	<i>Kansya</i> (Bronze)	-	-	+	-
9.	<i>Kshaudra</i> (Honey)	+	+	+	+
10.	<i>Loha</i>	+	+	+	-
11.	<i>Majja</i>	+	-	-	-
12.	<i>Pippali</i> (Long Piper)	-	+	+	-
13.	<i>Rajata</i> (Silver)	-	-	+	-
14.	<i>Shalaka</i>	-	+	+	-
15.	<i>Shara</i>	+	+	+	+
16.	<i>Sneha</i>	-	+	+	+
17.	<i>Suchi</i> (Needle)	-	-	+	-
18.	<i>Suryakanta</i>	-	-	+	-
19.	<i>Taila</i>	+	-	+	-
20.	<i>Tamra</i> (Copper)	-	-	+	-
21.	<i>Varti</i>	-	-	-	+
22.	<i>Vasa</i>	+	-	+	-
23.	<i>Yastimadhu</i>	-	-	+	-

The above listed *Dahanupakarana* are used based on amount of *Agni* needed, the condition of the disease and site of disease.

- ✓ *Dahanupakarana* is useful in *Agnikarma* for *Twak Dhatu*.
 - a. *Pippali*
 - b. *Ajasakrida*
 - c. *Godanta*
 - d. *Shara*
 - e. *Shalaka*
- ✓ *Dahanupakarana* is useful in *Agnikarma* for *Mamsa Dhatu*
 - a. *Jambhavsta Shalaka*

b. Other Metals

- ✓ *Dahanupakarana* is useful in *Agnikarma* for *Sira, Snayu, Sandhi and Asthi Dagdha*

- a. *Madhu*
- b. *Jaggery*
- c. *Sneha*

Acharya Vagbhata have added that for *Twakadah, Godanta* and *Suryakanta* should be used. *Madhu, Sneha, Jambavastha* and *Jaggery* should be engaged for *Agnikarma* of *Arsha, Bhagandara, Granthi, Nadivrana* etc.

Besides above description, different woods used for heating purpose has been described in texts viz. *Khadir, Badar* etc.

Classification of Agnikarma

During describing the *Agnikarma* there is no description available regarding its classification, but it can be classified on various bases as below:

1. According to *Dravya* used
2. According to the Site
3. According to the Disease
4. According to *Akriti*
5. According to *Dhatu* to be cauterized

1) According to *Dravya*

S.N.	Types	Dravya	Used for
1.	<i>Snigdha Agnikarma</i>	<i>Madhu, Ghrita, Taila</i> etc.	<i>Sira, Snayu, Sandhi, Asthi Dagdha</i>
2.	<i>Ruksha Agnikarma</i>	<i>Pippali, Shalaka, Godanta</i> etc.	<i>Twak and Mamsa Dagdha</i>

2) According to Site

S.N.	Site	Used for
1.	<i>Sthanika</i> (local)	<i>Kadara, Arsha, Vicharchika</i>
2.	<i>Sthanantariya</i> (systemic)	<i>Apachi, Gridhrasi</i>

3) According to Disease

- a) After surgical excision (*Chhedan*)- In the disease like *Arsha, Kadara* etc.
 - b) After surgical incision (*Bhedana*)- In the disease like fistula, sinus etc.
 - c) After filling by the *Guda*- In the disease like *Krimidanta*,
- 4) According to *Akriti* (*Dahana Vishesha*)

In regard to *Akriti*, Acharya Sushruta have mentioned four types of *Agnikarma*.^[44]

1. *Valaya*
2. *Bindu*
3. *Vilekha*
4. *Pratisarana*

Acharya Vagbhata has added more three types. ^[45]

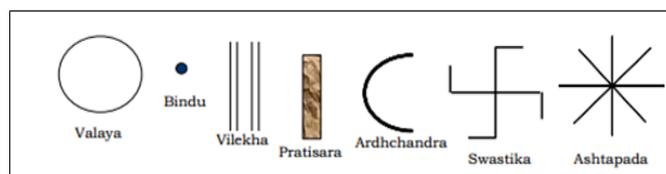
1. *Ardhachandra*
2. *Astapada*
3. *Swastika*

Here *Akriti* should be taken as shape of *Dahnopakarana* and final shape produced after actual *Agnikarma* both.

Acharya Dalhana has given explanation regarding the shapes of *Agnikarma* in his commentary. ^[46]

1. *Valaya*- Circular shape.
2. *Bindu*- Dot like shape.

3. *Vilekha*- Making of different shapes by heated *Shalaka*
4. *Pratisarana*- Rubbing at indicated site by heated *Shalaka* and there is no specific shape.
5. *Ardhchandra* - Crescent shape
6. *Swastika* - Shape of *Swastika Yantra*
7. *Astapada* - It is specific shape containing eight limbs in different directions.

5) According to *Dhatu*

According to Acharya Sushruta and Vagbhata the *Agnikarma* should be done as per involvement of the *Dhatu* such as:^[47,48]

1. *Twakadagdha*
2. *Sira and Snayudagdha*
3. *Mamsa dagdha*
4. *Asthi Sandhi dagdha*

A) Twaka Dagdha

When the *Twaka* is cauterized, burning is attended with a crackling sound, bad odor, and contraction of the skin.

B) Mamsa Dagdha

When *Mamsa* is cauterized, there occurs a pigeon like discoloration of the part, inflammation, mild pain, lesion get dried up and shriveled.

C) Sira Snayu Dagdha

When the *Snayu* and *Siras* are cauterized, there occurs black discoloration, swelling of the lesion and a cessation of discharge (including that of blood).

D) Sandhi and Asthi Dagdha

When *Asthi* and the *Sandhi* are cauterized, dryness, redness, hardness and fixity of the lesion occur.

Dagdha Bheda^[49]

According to Sushruta, all *Dagdha* are included under four types based on *Vrana*.

1. *Plushta Dagdha* (Scorched Burn)
2. *Dur Dagdha* (Blistered Burn)
3. *Samyaka Dagdha* (Superficial Burn)
4. *Ati Dagdha* (Deep Burn)

1. Plushta Dagdha (Scorched burn): *Plushta* is that in which a pigmented area of the skin is affected with severe burning pain sensation.

2. Dur Dagdha (Blistered burn): In this, *Sphota* (blebs, vesicles) appear accompanying with severe pain of sucking and burning in nature along with

redness and *Paka* (exudation or ulceration) which subside after a long time.

Based on the proper and site of the *Dagdha*, different sign and symptoms have been described in Ayurveda Classics as:

3. *Samyaka Dagdha* (Superficial burn)

S.No.	<i>Samanya Lakshana</i>	Related to Skin	Related to <i>Mamsa Dhatu</i>	Related to <i>Sira, Snayu</i>	Related to <i>Sandhi, Asthi</i>
1.	<i>Ana- awagadha Vranata</i>	<i>Shabdapradurbhao</i>	<i>Kapotvarnata</i>	<i>Krishna Vranata</i>	<i>Rukshata</i>
2.	<i>Talphala Varnata</i>	<i>Durgandhata</i>	<i>Alpa Swayathu</i>	<i>Unnata Vranata</i>	<i>Arunata</i>
3.	<i>Susamshita Vrana</i>	<i>Twak Sankocha</i>	<i>Alpa Swayathu</i>	<i>Srava- Sannirodha</i>	<i>Karkashata</i>
4.			<i>Shuska Sankuchit Vranata</i>		<i>Sthirata</i>

Samanya Lakshana of Samyaka Dagdha Vrana^[50]

1.	<i>Ana- awagadha Vranata</i>	Wound which is not deep
2.	<i>Talphala Varnata</i>	Fruit of <i>Tala</i> tree-blue-black in color
3.	<i>Susamshita Vrana</i>	Without elevation or depression

Special Symptoms of *Samyaka Dagdha Vrana* Related to Skin^[51]

1.	<i>Shabdapradurbhao</i>	Production of sound
2.	<i>Durgandhata</i>	Bad odor
3.	<i>Twak Sankocha</i>	Contraction of the skin

Special symptoms of *Samyaka Dagdha Vrana* Related to *Mamsa Dhatu*

1.	<i>Kapotvarnata</i>	Color as of pigeon i.e. ashy, dark grey
2.	<i>Alpa Swayathu</i>	Mild swelling
3.	<i>Alpa Vedana</i>	Reduced pain
4.	<i>Shuska Sankuchit Vranata</i>	Dry, contracted wound

Special symptoms and signs of *Samyaka Dagdha Vrana* Related to *Sira, Snayu*

1.	<i>Krishna Vranata</i>	Black coloration of Wound
2.	<i>Unnata Vranata</i>	Elevated Wound
3.	<i>Srava- Sannirodha</i>	Stoppage of discharge

Special symptoms and signs of *Samyaka Dagdha Vrana* Related to *Sandhi, Asthi*

1.	<i>Rukshata</i>	Dryness
2.	<i>Arunata</i>	Dark red coloration
3.	<i>Karkashata</i>	Roughness
4.	<i>Sthirata</i>	Stability

Ati Dagdha^[52] (Deep burn)

- Mamsa- avalambana* (Hanging of burnt tissue)
- Gatra- vishlesha* (Parts become loose and useless)
- Destruction of *Sira, Snayu, Sandhi* (Tendons in joints)
- Jwara* (Fever)
- Daha* (Burning)
- Pipasa* (Thirst)
- Murchha* (Unconsciousness)
- Wound heals in long time and healed ulcers have discoloration.

Agnikarma Kala^[53] (Suitable time)

Agnikarma can be done in all seasons except *Grishma* (summer) and *Sharada* (autumn). In emergency condition, the procedure can be adopted after proper counter measures during these seasons too.^[54] It is so because in *Sharada* there is *Prakopa* of *Pitta* and *Agnikarma* aggravates *Pitta* too so is contraindicated. While in *Grishma* season as it is hot *Agnikarma* is contraindicated.

Agnikarma- A Procedure

Purva Karma

Indications for *Agnikarma*

S.N.	Name of Diseases	Charaka Samhita	Sushruta Samhita	Astanga Sangraha	Astanga Hridaya
1.	<i>Abhisyanda</i>	-	-	+	-
2.	<i>Adhimantha</i>	-	+	+	-
3.	<i>Adhitanta</i>	-	-	+	+
4.	<i>Alaji</i>	-	-	+	+
5.	<i>AlarkaVisha</i>	-	+	-	+
6.	<i>Alasaka</i>	-	+	-	-
7.	<i>Antra Vridhi</i>	-	+	+	+
8.	<i>Apachi</i>	-	+	+	+
9.	<i>Arbuda</i>	-	-	-	+
10.	<i>Arbuda</i>	+	+	+	+
11.	<i>Ardhav Bhedaka</i>	+	-	-	-
12.	<i>Arsha (Vataja-Kaphaja)</i>	-	+	+	+
13.	<i>Balmika</i>	-	+	+	+
14.	<i>Bhagandar</i>	+	+	+	+
15.	<i>Charmakila</i>	-	+	+	+
16.	<i>Danta Nadi</i>	-	+	+	+
17.	<i>Danta Vidhradhi</i>	-	-	+	+
18.	<i>Galaganda</i>	-	+	+	+
19.	<i>Ganda Mala</i>	+	-	+	+
20.	<i>Granthi</i>	+	+	+	+
21.	<i>Gridhrasi</i>	+	-	-	-
22.	<i>Gulma</i>	+	-	+	+
23.	<i>Jalarbuda</i>	-	-	+	+
24.	<i>Kadara</i>	-	+	+	+
25.	<i>Kaphaja Shiroroga</i>	-	-	+	-
26.	<i>Karnarsha</i>	-	-	+	+
27.	<i>Krimi Danta</i>	-	+	+	+
28.	<i>Kunakha</i>	-	+	-	-
29.	<i>Lagana</i>	-	+	+	+
30.	<i>Lingarsha</i>	-	-	-	+
31.	<i>Mashaka</i>	-	+	+	+
32.	<i>Medaja Osth Roga</i>	-	+	+	+
33.	<i>Mushaka Visha</i>	-	-	+	+

34.	<i>Nadivrana</i>	-	+	+	-
35.	<i>Nasarsha</i>	-	-	+	+
36.	<i>Pakshama Kopa</i>	-	+	+	-
37.	<i>Puyalasa</i>	-	-	-	+
38.	<i>Sanyasa</i>	+	-	-	-
39.	<i>Sarpa Damsa</i>	+	+	+	+
40.	<i>Sheeta Danta</i>	-	-	+	+
41.	<i>Shiroroga</i>	-	+	-	+
42.	<i>Shlipada</i>	-	+	+	+
43.	<i>Shonita Ati Pravriti</i>	+	+	+	-
44.	<i>Sira Sandhichheda</i>	-	+	+	-
45.	<i>Sotha</i>	+	-	-	-
46.	<i>Tilakalaka</i>	-	+	+	+
47.	<i>Unmada</i>	-	-	-	+
48.	<i>Upadamsa</i>	-	+	-	-
49.	<i>Vartma Roga</i>	-	+	-	-
50.	<i>Vataja Shiroroga</i>	-	-	+	-
51.	<i>Vilambika</i>	-	+	-	-
52.	<i>Visarpa</i>	+	-	-	-
53.	<i>Visha Chikitsa</i>	+	-	-	-
54.	<i>Vishuchika</i>	-	+	+	+
55.	<i>Vishwachi</i>	-	-	+	+
56.	<i>Yakrita Plihodara</i>	-	-	+	+
57.	<i>Yonyarsha</i>	-	-	-	+

Contraindications of Agnikarma^[55,56]

1. *Pitta Prakriti*
2. *Bhinna Kostha*
3. *Daurbalya*
4. *Vridhha*
5. *Antah Shonita*
6. *Anuddhrata Shalya*
7. *Baal*
8. *Bhiru*
9. Multiple *Vrana*
10. *Balaka*
11. The person contraindicated for *Swedana* therapy is also contraindicated for *Agnikarma*.
6. *Nasa Sangya*
7. *Chhardi*
8. *Shochita*
9. Who has taken alcohol
10. *Oja Kshaya*
11. *Vidagdha*
12. *Rakta Pitta*
13. *Sthula*
14. *Ajirna*
15. *Kruddha*
16. *Trishna*
17. *Daurbalya*

Swedana is contraindicated for the person and suffering from:^[57-59]

1. *Pandu*
2. *Atisara*
3. *Kshaya*
4. *Guda Bhramsha*
5. *Udara Roga*
18. *Kshuda*
19. *VishaPidita*
20. *Kshata*
21. *Timira*

According to Charaka, *Agnikarma* should not be done in the *Vrana* of *Snayu*, *Marma*, *Netra*, *Kustha* and *Vrana* with *Visha* and *Shalya*.^[60]

Proper Instrumentation (*Agropaharaniyani*)

The *Agnikarma* room should be well prepared with all required *Agropaharaniyani* described by Acharya Sushruta.^[61]

- Prepare *Triphala Kashaya* for *Prakshalana* of the local part of patient.
- *Yashtimadhu Churna*, small pieces of *Kumari Patra*, swab holding forceps, *Plota* (gauze piece), *Pichu* (cotton) and gas stove, *Shalaka* etc. should be kept ready for use.
- The *Shalaka* is to be heated up to red hot.

Pre-Operative Assessment for *Agnikarma*

- *Agnikarma* is contraindicated in *Pitta* predominant *Prakriti* people.
- There is involvement of *Snayu*, *Kandara*, *Asthi* or *Sandhi*, hence, radiological investigations, M.R.I., C.T. Scan etc. are to be done to find out the pathology as per requirement.
- Patient is advised to take *Pichchhila* and *Snigdha* light diet before Therapy.
- Take informed consent

Painting and Draping

- The patient is asked to lie down on the table in prone position. Then the diseased area is exposed and painted (*Prakshalana*) with *Triphala Kashaya*.
- Drape the local part of the patient with sterilized cut sheets.
- On the diseased skin of the patient, the *Samyak Dagdha Vrana* should be produced by red hot *Shalaka*. The number of *Samyak Dagdha Vrana* should be 15-30 or according to the extent of the diseased area.
- Apply immediately cooling agents to subside burning sensation.

Inspection of Defective *Agnikarma* and their Management

- 1) ***Plushtha Dagdha***: If the *Shalaka* is not properly heated then it will produce such *Dagdha*.
For *Plushtha Dagdha* (burns of the first degree), warming of the body (increasing the body temperature) and administration of drugs/medicines of hot properties should be given as when the temperature of the body increased, the blood becomes liquefied helping for its normal circulation (*Dalhana*).
- 2) ***Durdagdha***: Because of unskilled hand or patient shaking his body parts *Durdagdha* can occur.
In *Durdagdha* (burns of the second degree) the physician should resort to both warm and cold therapies, application of Ghee, poultices and bathing the body should be done in cold state only.

3) ***Ati-Dagdha (burn of the fourth degree)***: This complication is produced due to more heat which is transferred from the red hot *Shalaka* to the diseased part. In *Ati Dagdha* the torn (hanging loose) muscles should be removed followed by cold therapies, then the physician should apply the paste of rice, bark of *Tinduki* mixed with *Ghee* or cover the wound with leaves of *Guduchi* or aquatic plant (like lotus etc.). All the treatments which are similar to that of *Visarpa* of *Pitta* origin should be done.

4) ***Daha (Burning pain)***: More or less burning pain is experienced by each and every patient with *Agnikarma Chikitsa*.

This may be treated by *Ghrutakumari Patra Swarasa*.

5) ***Dushtha Vranata (Sepsis of wound)***: After *Agnikarma*, it should be observed for any complications. If there is any sign of sepsis, treat the patient accordingly.

Pashchat Karma

Pathya Apathya and Follow Up: In *Agnikarma* procedure, *Samyak Dagdha Vrana* (therapeutic burn) is made. It is necessary that it should be healed without any complications. So, all the *Pathya-Apathyas* which have been described by Acharya Sushruta are advised here. It is utmost advisable to the patient that "Do not allow water to touch the *Samyak Dagdha Vrana* site for one *Ahoratra* (24 hours)". The complete *Ropana* (healing) of the *Vrana* should be observed.

Agnikarma Chikitsa can be repeated after 7 days.

Agnikarma Shreshthata (Superiority of Agnikarma)

- *Agnikarma* is superior to *Kshara karma* as disease burnt with *Agni* will never re-occur. Disease which cannot be cured with medicines, *Kshara* and Surgery, can be cured with *Agni*.^[62]
- The Surgical excision should be done with the sharp instrument which is heated by *Agni* with benefit of a sepsis, otherwise there will be sepsis by unheated instrument.^[63]
- There will be *Vasa* constriction due to heat and it will check the hemorrhage.^[64]

By this virtue *Agnikarma* is superior to every other procedure.

Agnikarma vs Cauterization

In modern medicine, there is no use of therapeutical burn i.e. *Samyak Dagdha Chikitsa*. But on the other form, uses of *Agnikarma* as for coagulation and tissue destruction are being used.

Cauterization^[65]

Cauterization is a medical term describing the burning of the body to remove or close a part of it. The main forms of cauterization used today are electro cautery and chemical cautery. Cautery can also mean the branding of a human, either recreational or forced. Accidental burns can be considered cauterization as well.

Cautery is described in the Hippocratic Corpus. The cautery was employed for almost every possible purpose in ancient times: as a 'counter-irritant', as a hemostatic, as a bloodless knife, as a means of destroying tumours, etc. Later, special medical instruments called cauters were used to cauterize arteries.

Electrocautery

Electrocauterization is the process of destroying tissue using heat conduction from a metal probe heated by electric current (much like a soldering iron). The procedure is used to stop bleeding from small vessels (larger vessels being ligated) or for cutting through soft tissue. Unlike electrocautery, Electrosurgery is based on generation of heat inside tissue, using electric current passing through the tissue itself.

Electrocauterization is preferable to chemical cauterization because chemicals can leach into neighboring flesh and cauterize outside of the intended boundaries.

Use of this electric cautery to cut the tissue or to coagulate the bleeding points, so this application of electro cautery is ideal for removing small skin tags, papilloma and also to control the bleeding during surgical procedures.

Chemical cautery

Many chemical reactions can destroy tissue and some are used routinely in medicine, most commonly for the removal of small skin lesions (i.e. warts or necrotized tissue) or for homeostasis. The disadvantages are that chemicals can leach into areas where cauterization was not intended. For this reason, laser and electrical methods are preferable. Some cauterizing agents are mentioned as below-

- Silver nitrate: Active ingredient of the lunar caustic, a stick that traditionally looks like a large match-stick. It is dipped into lunar caustic solution and pressed onto the lesion to be cauterized for a few moments.
- Trichloroacetic acid
- Cantharidin: An extract of the blister beetle that causes epidermal necrosis and blistering; used to treat warts.

Diathermy

The basic principle is to deliver high frequency current to the human body by means of active electrode and this after passing through the tissue to be diathermized returns via a return electrode. The intense heat produced by the passage of current destroys it in different ways depending on the type of current used. Cutting current is undamped and produce cutting effect secondary to intense heat generation within the tissue. It is hemostatic also and no bleeding can occur. Coagulating current is highly damped and coagulates by tissue dehydration and its effect is mainly hemostatic.

Blended current is a combination of two types of waves introducing both cutting and coagulating effects. Most new surgical units deliver low voltage cutting or blended current from a solid state generating unit through an isolated bipolar system which is considered the safest.

DISCUSSION

Agnikarma is considered as best therapy to pacify *Kaphanubandha Vata Dosha* because *Agni* possesses *Ushna, Tikshna, Sukshma, Aashukari Gunas*, which are anti *Vataja* and anti *Kaphaja* properties. *Agnikarma* is done by red hot *Shalaka*. The character of physical heat of red hot *Shalaka* transferred as therapeutic heat to *Twak Dhatu* by producing *Samyak Dagdha Vrana*. From *Twak Dhatu* this therapeutic heat acts in three ways- i.e.

Due to *Ushna, Tikshna, Sukshma, Ashukari Guna* it removes the *Srotavarodha* and pacify the vitiated *Vata* and *Kapha Dosha* and maintain equilibrium. It increases the *Rasa Rakta Samvahana* (Blood circulation) to affected site. More blood circulation flushes away the pain producing substances and patient gets relief from symptoms.

Therapeutic heat increase the *Dhatwagni*, so metabolism of *Dhatu* becomes proper and digest the *Ama Dosha* from the affected site and promotes proper nutrition from *Purva Dhatu* and in this way, *Asthi* and *Majja Dhatu* become more stable. Thus result precipitated in the form of relief from all symptoms.

Further it can be endorsed that the therapeutic heat goes to the deeper tissue like *Mamsa Dhatu* and neutralizes the *Sheeta Guna* of *Vata* and *Kapha Dosha* and in this way vitiated *Dosha* come to the phase of equilibrium and patients get relief from the symptoms.

Based on the same concept, the use of cauterization can be observed in present era. But the area of its use is so limited. While its use in Ayurveda

have been discussed elaborately in different ways and conditions.

CONCLUSION

Agnikarma Chikitsa is a simple effective para-surgical procedure for the management of local *Vata Kaphaja* disorder. It gives quick relief to the patient and hence is termed as best therapy.

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