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AN AYURVEDIC PERSPECTIVE OF VRANA

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ABSTRACT

The *Vrana* means Damage or destruction of the part or tissue of body, which leaves a scar after healing. From the beginning of civilization, *Vrana* was one of the major disease which was managed by human being. In ancient Indian literature there was large number of references related to the *vrana* (wound) and *vrana* ropan (wound healing) was mentioned. The acharya categorised *vrana* in to mainly two parts i.e. Nija and Aagantuja *vrana* along with this many classification, *Nidan, Samprapti, Rupa, Lakshanas, vrana pareeksha,* and treatment methods for *vrana* was mentioned in ayurvedic treaties. In this review article we have try to describe and compile the all detail description of *vrana* and try to compare the *vrana ropan* procedure with wound healing with the base of *Lakshanas* of *vrana*.

KEYWORDS: Vrana, Classification of vrana, Vrana Ropan, Wound healing, Wound management.

INTRODUCTION

The *Vrana* is one of the most important and fundamental aspects of *Shalya Tantra*, as after every trauma or any surgical procedures surgeon should think about the healing of wound, so every surgeon needs exclusive knowledge of wounds and its healing.

Here detailed description of *Vrana* is available in various *Ayurvedic* texts. *Acharya Sushruta* an ancient Indian Surgeon has described *Vrana* as one of the main subject in his treatise *Sushruta Samhita*. He has described *Vrana* from its different aspects, right from definition, causes, etio-pathogenesis, till the management of its scar tissue formation.

HISTORICAL REVIEW

Man has been suffering from trauma in various forms since the down of human race. The ancient people have put their maximum efforts to treat this condition. The importance they gave to treat the wounds is evident from their many fold approach to this problem.

Historical review helps to explore hidden facts and ideas of concerned subject. Vedas and epics provide us knowledge of surgery and wound healing treatments. Battlefields in those days yielded enough opportunities to counter many types of injury which led to the rapid expansion of the knowledge. The earliest record of treatment of wound is found in Vedas the oldest book of world written about 3000BC.

A. *Vedic* period *Rugveda*

There was description of about injured leg of queen *Bisphala* being treated by amputation.^[1]

Samveda

In *Samveda* also *Vrana Ropana* of a prince who was injured during war has been depicted.^[2]

Atharvaveda

Here in *Atharvaveda* Following terms appears which may be included under *Vrana Kshetriya* – It is a disease like *Kustha*.^[3]

Asrava – Accidental haemorrhage, discharge from Vrana.

B. Samhita Period

Charaka Samhita –Acharya Charaka has mentioned concepts of *Vrana* and its management. in charaka samhita in Dwivraniya Adhyaya of Chikitsastana.^[4]

Sushrutha (1000BC)

Detail description of *Vrana* and its management discussed by *Sushruta*. During this time the knowledge of wound was its peak level. the subject of wound healing forms the central theme of *Sushruta Samhita*. As emphasized while giving the definition of *Shalya Tantra* he says *Tantras* in which knowledge of various *Shalya*, discharges from *Vrana*, and *dushta Vrana* along with three stages of *Vrana* sopha is dealt with *Shalya Tantra*.

C. Sangraha Period

Astanga Sangraha (5TH Century A.D)

In *Astangsangraha* there are many preparations for treatment of wound and described 8 types of traumatic wound and also emphasized on *Ghrit* and *Taila* base ointment for local use.

Vrida Madhava (9TH Century A.D)

Advice use of Jatyadi Ghrit in the management of Aagantuja Vrana.

Sarangadhara Samhita

Application of *Nimba dala kalka* in *Vrana* has been brought out. In *purva khand* Taila is mentioned for *Vrana* under *Taila Kalpana*.

1. Etymology:- (Vyutpathi of Vrana)

The word "Vrana" is derived from the root "Vriya" having the meaning "to recover", which is further suffixed by "ach" in the sense of "Bhavya. The "ch"

4. Nidana of Nija Vrana

The causative factors responsible for vitiation of *Doshas* are same of *Vrana* formation they are as follows.

Doshas	Aahaara	Vihaara	
VATA	Vaataprakopaka Aahaaras.i.e. Laghu, Katu, Lavana Aahaara, Shushkashaaka etc.	Balavat Vigraha, over administration of Vamana, Virecana, Raktamokshana, Vyaayaama and suppression of Adhaaraneeya Vega, Gaja, Ratha, Padaaticarya etc.	
PITTA	Pittaprakopaka aaharas i.e. Ushna, Amla, Lavana, Katu, Kshaara, Teekshna, Laghu, Vidaahi, Tila Taila, Pinyaaka	Krodha, Shoka, Bhaya, Aayaasa, Upavaasa, Maithuna	
KAPHA	Kaphaprakopak aaharas i.e. Heavy, Sweet, Slimy, Sheeta, Lavana, Maasha, Mahaamaasha	Divaaswapna, Avyaayaama, Aalasya	

5. Nidana of Aagantujaja Vrana^[6]

The Aagantuja Varnas are caused by trauma from pashu, purusha, vyaala, pakshi, peedana, prapatana, teekshanaoushada, Agni, kshara, visha, kapaala, shringa.

6. Classification of Vrana

Different Classification of Vrana based on Hetu, Avastha and Saadhyasaadhyatha.

2. Nirukti of Vrana

"Vrana Gaatra Vichurnane, Vrana yati iti Vrana ha"^[5] Gaatra.

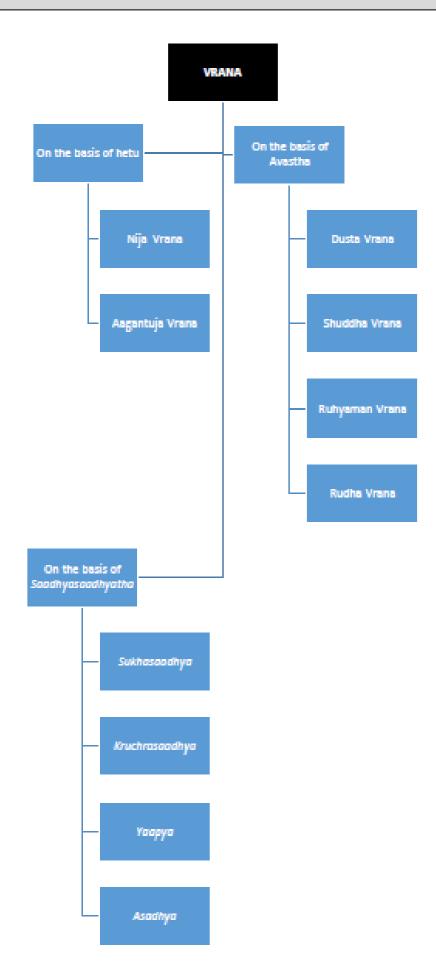
Part of body or tissue

Vichurnan - Means discontinuity, damage, break, or destruction Damage or destruction of the part or tissue of body part is termed as *Vrana*.

3. Definition:- (Paribhasha of Vrana)

"Vrunoti Yasmaat Roodhe api Vrana vastu na Nashyati | Aadeha Dhaaranaat Tasmaat Vrana ityuccyate budhaihi"|| Sushruta defines Vrana is a condition where the tissues in the body are selectively destroyed and after repair leaves a scar for whole life.

In *Sushruta Samhita* the *Acharya Sushruta* has clearly mentioned that *Vrana* is not only limited to subcutaneous lesion but destructive lesions occurring in any tissues is considered as *Vrana*. So here becomes clear that from his description of *Vrana* adisthana or *Vrana* vastu.



Further the *Nija vrana* are divided into 16^[7] and *Aagantuja vrana* 6^[8] types

Sr.no	Vrana types	Sushruta Samhita	Ashtang hridaya ^[9]	Charaka Samhita ^[10]
1	Vataja	+		
2	Pittaja	+	+	+
3	Kaphaja	+	+	+
4	Raktaja	+	+	+
5	Vata-Pittaja	+	+	
6	Vata-Kaphaja	+	+	
7	Vata-Raktaja	+	+	
8	Pitta-Kaphaja	+	+	
9	Pitta-raktaja	+	+	
10	Kapha-raktaja	+	+	
11	Vata-pitta-Kaphaja	+	+	
12	Vata-pitta-raktaja	+	+	
13	Vata-kapha-raktaja	+	+	
14	Pitta-kapha-raktaja	+	+	
15	Vata-pitta-kapha-raktaja	+	+	
16	Shuddha Vrana	+	+	

Types of Aagantujaja Vrana With Lkshana Acc To Diffrant Acharya

Туре.	Sushruta	A.San.	A.H	M.Ni.
Chinna	<i>Vrana</i> is oblique /straight, separation Of Body parts.	Chinna Vrana is further divided into five types i.e. Ghrista, Avakritha, Avagaada, Vilambita, Paatita.		<i>Vrana</i> is oblique/straight, wide, causing seperation of body parts.
Bhinna	Perforation Puncture of <i>Aashayas</i> , exuding <i>mild Sraava</i> .	Mentioned Anubhinna, Bhinnotthundita, Atibhinna, Nirbhinna to Those Vranas which occure in Koshtha.	Vrana occurring in <i>Koshtha</i> with small orifice.	Puncture of Aashayas, discharging contents to the exterior.
Viddha	than Aashaya,	Classified into further 8 types-Anuviddha, Uttundita, Atividdha, Nirviddha etc.	Vrana with small orifice occurring anywhere other than Koshtha.	Injury to any part of body other than <i>Aashayas</i> and Uttundita.
Kshata	Chinna nor <i>Ati-Bhinna</i> . But having features of both and	Considered <i>Chinna,</i> <i>Viddha & Picchita</i> as <i>Kshata</i> because of loss of Skin continuity.		Neither <i>Ati Chinna</i> nor <i>Ati Bhinna</i> but having mild features of both & irregular in shape
Picchita	Flattening of any part of body along with <i>Asthi</i> , filled with <i>Rakta</i> and <i>Majja</i> .	Body part with Asthi increasing in size by getting soaked in Rakta and Majja. it is of two types with <i>Vrana</i> and without <i>Vrana</i> .	Mentioned Vidalita in which features are similar to features mentioned in Sushruta.	Flattening of any part of body along with <i>Asthi</i> , filled with <i>Rakta</i> <i>and Majja</i> .

7. According To Avastha Types of Vrana

a) Lakshanas of Dusta Vrana

Sr. no.	Character	Sushruta ^[11]	Charka	A.S.	А.Н.	M.Ni.
1	Akruti	Atisamvruth a Ativivrutha	_		Either Samvruth a Vivrutha,	-
2	Varna (colour)		Svetatva, Neelatva,	Krushna, Paanduta	Raktatwa, Paanduta	-
3	Vedana	Vedanayukta	Maharuja	Vedana Pitaka,	Atiruk	-
4	Srava	Pootipooya, Dushta Shonitha,	Bahusraava	Discharges Pooti Pooya,	Pooti Pooya	Pooti Sraava
5	Sparsha	Atikatina Mrudu, Utsanna, Avasanna.	-		Katina, Mrudu, Ati ushna, Atisheeta	-
6	Anya Lakshana	Daaha, Paaka, Raaga, Kandu, Shopha	-	Daaha, Paaka, Kandu	Daana, Swayatnu, Kandu	Utsangi, Chirastitha, doesn't posses any features of shuddha vrana

b) Lakshanas of Shuddha Vrana^[12]

Sr.no	Character	Sushruta Samhita	Charaka Samhita	Ashtang hridaya	Madhav Nidan
1	Akruti	Suvyavasthito			Suvyavasthito
2	Varna	Pinkish (Jivhatalabho)	Reddish black	Pinkish	Pinkish (Jivhatalabho)
3	Vedana	Vigat vedana	Na-ati Ruk		Alpa vedana
4	Srava	Nirasrava	Nirasrava	Nirasrava	Nirasrava
5	Sparsha	Mrudu, Snigdha	Mrudu	Mrudu	Ati Mrudu

c) Lakshanas of Ruhyaman Vrana

Ruhyaman Vrana is characterized by the absence of slough on the floor and it is Dry in nature, this is the stage of repair.

Features

- Kapota Varna i.e. grey colour like pigeon
- *Anta-kledavarjita* margins of the *Vrana* are dry. Absence of Muco-purulent discharge or 'kleda.'
- *Anta-sthira Vrana* margins are firm with granulation tissue.
- *Chipitikayukta* surrounded by shreds of epithelium

d) Lakshanas of Rudha Vrana

The clinical features of Rudha *Vrana* is the absence of any pathology at the site of lesion like absence of nodules, swelling, pain and different colours and surface is of the same level as the surrounding normal part of the body. This is the last stage of wound healing. It shows following features.

- *Rudhavartmanam*:- complete healing by approximation of wound margins.
- *Agranthi*: there is no hyper-granulation or glandular mass or induration.
- Ashunam: absence of swelling.
- Arujam: absence of pain.
- *Twak-savarna*: having colour like the skin.
- Samatalam: at the same level of the skin.

8. Examination of Vrana

Pancha Lakshanas for Examination^[13]

Acharya Sushruta described local examination based on fallowing parameters like Varna, Gandha, Srava, Vedana and Akriti.

i. Gandha i.e. Smell

Sushruta has described gandhas according to dominance

iii. Srava i.e. Discharge

The discharge from *Vrana* is classified according to *dosha* predominance.

Dosha	Vrana Srava
Vata	Parusha, Shyaava, Dadhimastu, Kshaarodaka, Maamsa etc.
Pitta	Gomeda, Shanka, Gomootra, Maadhveeka Taila etc.
Kapha	Navaneeta, Kaseesa, Majja, Naarikelodaka,Varaahavasa etc.
Rakta	Like Pitta but more of Raktha Sraava.
Sannipataja	Naarikelodaka, Priyanguphala, Kaanjeeka etc.

of dosha in Vrana, these are as follows,

Dosha	Gandha
Vata	Katu
Pitta	Teekshna
Kapha	Aamagandhi
Rakta	Lohagandhi
Vata pitta	Laja gandha
Pitta kapha	Atsi taila
Pitta raktha	Tila taila
Abnormal gandha	Grutha gandha

And according to *Charaka* there are eight types of *Vrana* gandhas, these are as follows *Sarpi, Taila, Vasa, Puya, Rakta, Shyava, Amla, Putika*

ii. Varna i.e. Colour

Here Colour is important for the diagnosis of predominance of *dosha* and *avastha* of *Vrana*.

Dosha	Colour of Vrana
Vata	Kapota, Bhasma Asthi, Parusha,
vaia	Aruna, Krushna.
Ditta and	Peeta, Peeta, Haritha, Shyaava,
Pitta and Rakta	Krushna, Rakta, Kapila,
κακια	Pingala.
Kapha	Sweta, Paandu, Snigdha.
Sannipataja	Sarva Varna.

Vrana Srava According To Sthana.

Sthana	Srava
Twak	Salilaprakasha, Peetaavabaasa.
Maamsa	Sarpiprakasha, Sheeta, Picchila.
Sira	Rakta Atipravruthi, Pooya comes out after Paaka.
Snaayu	Snigdha, Ghana, Singhanaka pratima, Sarakta.
Asthi	Discharge mixed with Rakta, Majja.
Sandhi	Picchila, Saphenarudhira.
Kostha	Discharges Asruk, Mootra, Pureesha, Pooya, Udaka.

iv. Vedana i.e. Pain

Vedana (Pain) in Vrana is different according to dosha predominance.

Dosha	Vedana
Vata	Todha, Bhedana, Chedana, Taadana, Manthana.
Pitta	Nirdahana, Sphotana, Kampana, Vidaarana.
Kapha	Kandu, Gurutwa, Suptata, Alpa Vedana.
Rakta	Similar to that of <i>Pitta</i> .
Sannipataja	All types of Vedana.

v. Akriti i.e. Shape.

Sr.no	SHAPE OF VRANA
1	Aayatha
2	Chaturasra
3	Vrutha
4	Triputaka

Vrana s with abnormal shapes are difficult to treat, According to *Vagbhata* shape of *Vrana* depends on the shape of *Shalya*, Shapes of *Aagantuja Vrana* s are *Aayatha*, *Chaturasra*, *Trayastra*, *Mandalina*, *Ardhachandraakaara*, *Vishaala* and *Kutila* etc. Some resembling *Sharaavanimna madhyascha*, others with elevation in the centre or *Aagantuja Vrana* s have innumerable shapes.

- 9. Factors delaying wound healing: (Acc.to *Ayurveda*)
- 1. Aahara Ati-ahaar, Anashana, Viruddhashana, Asatmya Aahara.
- 2. Vihara Vyayama, Divaswaap, Atimaithuna.
- 3. Dharaniya Vega Krodha, Bhaya, Lobha, Harsha, Shoka.
- 4. Vrana Adisthana Asthi Bheda, Nakha Kashtha Prabheda, Charmaloma.
- 5. Structural Form of Vrana Snayukleda, Seerakleda, Gambhirya, Savishatwa, Sarpana, Kumbhimukha, Agantuja, Atisneha.

6. Other Factors – Atibhaishjya Prayoga, Mithya Yoga, Mithya Bandhan, Atighattana, Madhumeha, Kushtha, Shosha.

10. Principle of Management of *Vrana Vranithaagaara*

-Vrana Chikitsa should be done in Vranithaagaara to prevent the invasion of Nishacharas in Vranithasya. It should be auspicious and in accordance with Vaastushaastra etc. Vranitha will not suffer from physical, mental & traumatic disorders by residing in such Aagaara, Rakshakarma should be done along with Dhoopana

In *Charaka Samhita* he mentioned that there are 36 methods of treatment of *Vrana* whereas *Acharya Sushruta* mentioned *saptopakrama* and *Shasti Upakaramas*. *Saptopakrama* is the summary of *Shasti Upakaramas* only. The approach towards *Vrana* is decided only after observing different stages, *Doshas* and situation of *Vrana*.

Shasti Upakarama	s mentioned by	various acharyas	as follows
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Sr. no		Sushruta ^[14]	Charaka Ch.Chi.25	Kashyap	A.S & A.H. A.San.Ut.29 A.H. 4/25
1	Apatarpana	+	-	-	-
2	Aalepa	+	-	Pralepa	Pralepa
3	Parisheka	+	-	+	+
4	Abhyanga	+	-	-	+
5	Swedana	+	-	-	+
6	Vimlapana	+	-	-	+

7	Upanaha	+	-	+	-
8	Pachana	+	-	-	+
9	Vistravan	+		+	+
10	Snehana	+		+	-
11	Vamana	+	-	-	+
12	Virechana	+	-	-	+
13	Chedana	+	+	-	-
13	Bhedana	+	Patana	-	-
15	Darana	+	-	-	+
16	Lekhana	+	+	-	-
10	Eshana	+	+	-	-
18	Aharana	+	-	-	-
10	Vyadhana	+	+	-	-
20	Sravana	+	-	-	-
20	Sivana	+	+	-	-
21	Sandhana	+	+	-	-
22	Pidana	+	+ Avapidana	-	+
23	Shonit sthapana	+	-	-	-
24	Nirvapana	+	+	-	+
25	Utkarika	+	-	-	-
20	Kashaya	+	+	-	-
27	Varti	+	-	-	+
<u>28</u> 29	Kalka	+	-	+	1 ⁻
30	Sarpi	+	+	-	Ropan Ghrit
30	Taila	+	+	-	Ropan Taila
31	Rasakriya	+	-	-	+
32	Avachoornan	+	+	-	
34	Vrana Shodhana	+	+	-	+
35	Utsaadana	+	+	-	+
36	Avasaadana	+	+	-	+
				-	+
37	Mrudukarana	+	+	-	+
37 38	Mrudukarana Daranakarma	+ +	+++++	-	+
37 38 39	Mrudukarana Daranakarma Ksharkarma	+ + + + +	+ + +Daha		+ +
37 38 39 40	Mrudukarana Daranakarma Ksharkarma Agni karma	+ + + + +	+ + + Daha + Daha	- - -	+ + + +
37 38 39 40 41	Mrudukarana Daranakarma Ksharkarma Agni karma Krishnakarma	+ + + + + +	+ + Daha + Daha Varnya	- - - Savarnikaran	+ + + Savarnikaran
37 38 39 40 41 42	Mrudukarana Daranakarma Ksharkarma Agni karma Krishnakarma Pandukarma	+ + + + + + + + +	+ + Daha + Daha Varnya Varnya	- - Savarnikaran Savarnikaran	+ + + Savarnikaran
37 38 39 40 41 42 43	Mrudukarana Daranakarma Ksharkarma Agni karma Krishnakarma Pandukarma Pratisarana	+ + + + + + + + + + +	+ + Daha + Daha Varnya Varnya -	- - Savarnikaran Savarnikaran -	+ + Savarnikaran Savarnikaran -
$ \begin{array}{r} 37 \\ 38 \\ 39 \\ 40 \\ 41 \\ 42 \\ 43 \\ 44 \\ \end{array} $	Mrudukarana Daranakarma Ksharkarma Agni karma Krishnakarma Pandukarma Pratisarana Romasanjanan	+ + + + + + + + + + + + +	+ + Daha + Daha Varnya Varnya - + Lomarohan	- - Savarnikaran Savarnikaran - -	+ + Savarnikaran Savarnikaran - +
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65	Ropana lepa	-	+	-	+
66	Ropana	-	+	+	-
67	Utklinnaprakshal	-	-	+	Prakshalan
68	Shodhana	-	-	+	-
69	Prachana	-	+	-	-

11. DISCUSSION

In *ayurvedic* science the *acharya sushruta* mentioned many different aspect of *vrana* regarding characteristics, types, pathogenesis its treatment modalities and prognosis in his treaties *sushruta samhita*.

He mentioned the characters of *vrana* (wound) in *Vrana* prashniya Adhyaya. But before that he categorically emphasized the care of wounded patients and diets which could be beneficial to the patient. He was totally aware of the aetiopathogenesis of *vrana* and classified *vrana* into mainly two categories – 1. *Nija vrana* and 2. *Agantuja vrana*.

Acharya sushruta mentioned five kind of examination for vrana in sushruta samhita as follows:-

Vrana akruti (Size and shape of wound), Vrana srava (Discharge of wound), Vrana vedana (Pain), Vrana Varna (Colour) and Vrana gandha (Smell). Using all five senses and interrogation.

So, with the help of above examination we can make diagnosis of stages of wound according to these signs. The treatment has been planned by Sushruta according to the classification of *Vrana*. He has described many different approach for Dushta and shuddha *vrana*. Sushruta advocated Shastra Karma in management of *vrana* if needed and local application of ropana drugs in the traumatic wounds, to facilitate union.

Process of vrana ropana

An attempt is made to understand the process of *ropana* (wound healing) in better way from *Ayurvedic* point of view in light of modern aspect considering the clinical stages of *vrana ropana*.

1. *Dushta vrana*:- Here Dushta *vrana* is the wound which is affected by Tridoshas have purulent and profuse discharge, bad smelling and blackish, greenish, yellowish coloured with pain. It can be correlated with infected wound.

2 *Shuddha vrana:-* is the wound which is free from dosha and with mild pain or no pain, pinkish colour, with minimal or no discharge / slough, Shows healthy granulation tissue.

So with above clinical feature this stage can be describe / compared as stage of traction which is indicative of process of wound healing.

3 Ruhyaman vrana:- This is the next stage of vrana

ropana process. In this stage wound / *vrana* is seen as pale or grayish colour, healthy dry margins, without discharge/ slough, firm based without any induration, increase growth of granulation tissue and all are indicative of wound processing towards healing. So this stage can be compared as **stage of repair.**

4 *Rudha vrana:*- This is the final stage of wound healing (*vrana ropana*). In this stage wound is seen to be complete approximation of wound margins with scar formation which has colour similar to that of skin, with proper union of wound margin, without any swelling and pain. So this stage can be describe with stage of **Maturation phase**.

12. CONCLUSION

The Classical *ayurvedic* treaties deals with the *vrana* and management. The *vrana* is either wound or ulcer or surgical wound. Common complication of wound like infection, non-healing or delayed healing and the abnormal scar after healing are well dealt in *ayurveda* by means of shasti upakarmas.

The numerous *ayurvedic* compound of both herbal and herbomineral can heal any ulcer if applied with proper diagnosis and holistic approach. Prognosis or *Sadhyasadhyata* explained in classics related to *vrana* due to either indigenous factor or exogenous factor remain appropriate even with contempary medical science management.

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