



REVIEW ARTICLE

SADDYO VRANA: A CRITICAL REVIEW

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ABSTRACT

Shalyatantra, an ancient surgical science, accepts all procedures with the goal of eliminating the cause of any pain or suffering experienced by the body or mind. In the modern period, *Vrana* is a common condition that is primarily caused by trauma or some other pathologic condition and can cause suffering to patients for a long time. In *Ayurveda*, *Vranais* explained by *Brihatrayee*, where its significance has been emphasized to its symptomatology and successful management. The Father of surgery, *Acharya Sushruta*, highlighted eight *adhithana* for elucidating *vrana* and deciphering sixty different methods for managing it. *Saddyo vrana* is the term defined by *Acharya Sushruta* to describe a *vrana* that happens suddenly as a result of external injury from a person, animal, etc. The concept of modern science in the treatment of traumatic injuries is the control of bleeding, certain procedures and replacement of lost blood, but the main principle of Ayurvedic science is *Tridosha Siddhanta*, which aims to normalize vitiated *doshas* and also *raktastambhana*. *Acharya Sushruta* defined *Saddyovrana* into six categories: *Chhinna*, *Bhinna*, *Viddha*, *Kshata*, *Pichchita*, and *Ghrishta*. In this review article an attempt has been made to explore *Saddyovrana* from *Ayurvedic* as well as allopathic viewpoint.

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INTRODUCTION

Ayurveda is a science of life and is believed to exist as long as the origin of life on this earth. Humans have been prone to injury since the beginning of existence, which led them to consider healing from a primitive stage. *Acharya Sushruta* has mentioned various types of *Vrana* and their management, which is of prime importance in any surgical practice.^[1] The prevalence of wound infection has significantly decreased recently because of the amazing advancements in surgery across a variety of specialties. This is achieved by reducing wound healing obstacles to a certain extent.

Definition of *Vrana*

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oz.k;rhfr oz.k%AA ¼lq0fp0 1@6½

“*Gatra*” means tissue (body tissue or part of body)

“*Vichurnane*” means destruction, break, rupture and discontinuity (of the body or tissue).

Any destruction or break or rupture or discontinuity of body tissue, is called ‘*Vrana*.’

In *Sushruta Samhita*, *Acharya* has clarified that as “Wound is an entity in which destruction of living tissue occurs and after healing it leaves behind a scar which persists for lifetime.”

Classification of *Vrana*: *Vrana* are broadly classified into two, according to their origin and etiology.

- A. *Nija Vrana*
- B. *Aganthuja Vrana*

Nija Vrana are formed by vitiated *doshas* while *Aganthuja Vrana* are caused by external trauma, eg. bites of men, animals, birds, reptiles, etc. *Vrana* are again classified into two on the basis of the *Dosha Dushti*, they are *Dushta Vrana* and *Shuddha Vrana*. Another type of *Vrana* is the *Saddyo Vrana*, which is manifested by external causes. They include accidental wounds or traumatic wounds and surgical wounds. So these *Saddyo Vrana* can also be called as *Aganthuja Vrana*. They can be correlated with “wounds” described in modern science. This is why almost all the *Acharyas* have classified *Saddyo vrana* in a

separate chapter. The word *Agantuja* is defined by *Amarkosha* as what comes later or afterwards, which is incidental or accidental, occurs due to an external cause. *Abhighata* can be caused by *Purusha*, *Pashu*, *Pakshi*, *Vyala*, *Sarisripa*, *Patana*, *Peedana*, *Prahara*, *Agni*, *Kshara*, *Tikshnoushadha*, *Shakala*, *Kapala*, *Shrunga*, *Chakra*, *Ishu*, *Parashu*, *Shakti* or *Kunta*. *Saddovrana* is a type of *Agantuja Vrana*, which occurs suddenly due to a trauma.

Nidana: Two types of *vrana nidana* have been mentioned in all classical texts of *Ayurveda*.

1. *Nidana* of *Nija Vrana*
2. *Niadana* of *Aganthuja Vrana (Saddyo Vrana)*

Nija Vrana are caused by the deranged *doshas* due to their respective etiological factors.

Aganthuja Vrana are caused by either internal or external injuries due to living or non-living objects. The living causes of *Saddyo vrana* are bites of men, birds, ferocious animals, etc. The non-living causes may be classified as physical, mechanical, chemical and toxic. Among these fall, hit, blow, etc. are physical causes. Injuries inflicted due to pieces of wood weapons, bones, etc. are mechanical factors. Wounds caused by acid or alkali can be considered as chemical factors.

Samprapti: The *Samprapti* is understood in two ways, depending upon the type of *Vrana*, viz.

1. *Nija Vrana Samprapti*
2. *Aganthuja Vrana Samprapti*

In *Nija Vrana*, *Tridoshas* by their respective etiological factors get deranged and get lodged in the *Vrana Adhishtana* resulting in *Vrana*. *Aganthuja Vrana* are caused due to direct external injuries to the body. The local structures i.e. *Twak*, *Mamasa*, *Sira*, *Snayu*, *Asthi*, *Marma* etc. are disrupted according to etiological factors producing *Saddyo Vrana* or *Aganthuja Vrana*. Here structural derangement occurs first followed by vitiation of *Doshas*. If it is not treated at this stage, it progresses into *Dushta Vrana*. In *Nija Vrana* the *Paka* takes place first by the vitiation of *Doshas* and then it manifests as *Dushta Vrana*. *Aganthuja Vrana* becomes a *Nija Vrana* within a period of 7 days.

Vrana Parigraha or Vrana Vastu: It is the site of occurrence of *Vrana*. *Acharya Dalhana* further explains *Parigrahi* as *Adhishtana* or *Ashraya* for *vrana*. *Vrana Adhishtana* are eight in number viz. *Tvak*, *Mamasa*, *Sira*, *Snayu*, *Sandhi*, *Asthi*, *Koshtha* and *Marma*, which means that *Vrana* can take *Ashraya* in any one or gradually involve all of these sites in its *Samprapti*.

Vrana Aakriti

There are different factors influencing *Saddyo Vrana* such as:

ukuk/kkjkeq[kS% 'kL=SukZukLFkkufikfrS% A
ukuk:ik oz.kk ;s L;qLrs" kka o{kfe y{k.ke~ AA ¼lq-fp- 2 4½

Saddyo Vrana are of numerous shapes, depending upon the different types of edges and shapes of weapons, different types of anterior end of weapons and varies depending upon the different parts of the body which get injured.

The different *Aakriti* of *Vrana* due to the above factors are *Ayata* (Rectangular), *Chaturasra* (Quadrangular), *Tryasra* (Triangular), *Mandala* (Circular), *Ardhachandra* (Semi lunar), *Vishala* (Extensive), *Kutila* (Crooked), *Sharavanimnamadhya* (Depressed in centre like saucer) and *Yavamadhya* (Raised in centre like barley grain).

Classification of Saddyo Vrana: ^[2,3,4,5]

Saddyo Vrana according to different Acharyas

Su. Sa.	A.S.	A.H.	Ma. Ni.	Sh. Sa.
<i>Chhinna</i>	<i>Chhinna</i>	<i>Ghrishta</i>	<i>Chhinna</i>	<i>Avakrita</i>
<i>Bhinna</i>	<i>Viddha</i>	<i>Avakrita</i>	<i>Bhinna</i>	<i>Vilambita</i>
<i>Viddha</i>	<i>Picchita</i>	<i>Vicchinna</i>	<i>Viddha</i>	<i>Chhinna</i>
<i>Kshata</i>	-	<i>Pravilambita</i>	<i>Kshata</i>	<i>Bhinna</i>
<i>Picchita</i>	-	<i>Nipathita</i>	<i>Picchita</i>	<i>Parachalita</i>
<i>Ghrishta</i>	-	<i>Viddha</i>	-	<i>Viddha</i>
-	-	<i>Bhinna</i>	-	-
-	-	<i>Vidhalita</i>	-	<i>Nipathita</i>

Sushruta classifies these into six types according to their *lakshanas*-

They are as follows:

1. Chhinna (Excised wound)

fij'phua _tqokZ·fi ;ks oz.k'pk;rks Hkosr~
xk=L; ikrua pkfi fNUufeR;qifn';rs AA lq0 fp0 02@10

It is a wound which is an open cut transversely or longitudinally and where the limbs are separated from the body.

According to *Acharya Sushruta*, *Vrana* which is caused by a weapon which is oblique or straight affecting a larger surface of body and may even result in excision of that part is *Chhinna Vrana*. According to *Ashtanga Sangraha*,^[6]

It is the one in which the particular part of the body is separated into two parts. He again divided each of these into several groups according to the degree of injury.

It is of five types as follows –

- a. *Ghrishta* -slight injury
- b. *Avakrita* -injury extending up to the *mamsa*.
- c. *Vicchinna* -in it there is involvement of internal structures.
- d. *Pravilambi* -injury may be deep extending up to the bones and ligaments.
- e. *Pathita* - part of the body is completely separated.

Excised wound is a type of injury where tissue is removed or cut away from the body. It occurs when tissue is intentionally removed or cut away from the body, often in a surgical setting or as a result of trauma.

2. Bhinna (Penetrating wound)

dqUr'kärö`f`V[kM~xkxf"kk.kkfnf'kj'k;% A
gr% fdf~pr~ lzosÜkf) fHkUuy{k.keqP;rs AA lq0fp0 02@11

It is caused by piercing of the sharp instrument like spear or sword into the body cavities in which there is only a little discharge of blood or *Lasika*.

According to *Acharya Sushruta*,^[7] *Vrana* which involves the *aashaya* due to injury from *shastras* like *kunta*, *shakti*, *rishti* and *khadga* resulting in *Sraava*.

Penetrating wound is a type of injury where an object pierces the skin and underlying tissues, potentially causing damage to internal organs or structures. They are similar to puncture wound which occur due to stab. Abdomen and chest are common sites. Liver, bowel, Spleen, major vessels and other visceral organs may be involved. Ultrasound and CT scan should be done to evaluate deeper organ injuries. Wound should be explored properly under general anaesthesia.

3. *Viddha* (Superficial punctured wound)

lw{ekL;'kY;kfHkgra ;n³~x Rok'k;kf}uk A
mÜkqf.Mr fuxZra ok rf}U}fegr fufnZ'ksr~ AA lq0fp0 02@19

It is a wound which results due to injury by a sharp instrument in any part of the body, other than the *koshtha*.

According to *Acharya Sushruta*, *Vrana* without the involvement of the *aashaya* with elevation of the organ (with *shalya*) or the organ being in the same position (without *shalya*) due to the blows of small-headed weapons is called *Viddha Vrana*.

According to *Astanga Sangraha*,^[8] Injury caused by weapons or instruments which pierces the skin and internal structures. It is of 8 types –

- Anuvidha* - The extension of *shalya* is up to *mamsa*
- Uthundita* - *Shalya* causing protrusion of the skin
- Athividha* - *Shalya* goes deep into the internal structures
- Nirvidha* - *Shalya* enters through one side of the body and comes out through the opposite side.
- Anubhinna* - It is manifested in any part of the body other than the *Koshta*.
- Bhinnothunditham* - It is manifested in the *Koshta*
- Athibhinna*
- Nirbhinnam*

Punctured wound is a type of injury characterized by a small, deep hole caused by a sharp, pointed object piercing the skin and underlying tissues. It is an injury that occurs when a sharp, pointed object, such as a nail, needle, or knife, penetrates the skin and underlying tissues, creating a small, deep hole.

4. *Kshata* (Lacerated wound)

^ukfrfNUua ukfrfHkUueqHk;ksyZ{k.kkfUore~A
fo"kea oz.keaxs~ ;rr~ {kra RofHkfufnZ'ksr~ AA lq0fp0
02@20

It is having the signs and symptoms of both cut and perforation (*chinna* and *bhinna*) and it is uneven in appearance.

According to *Acharya Sushruta*,^[9] *Kshata Vrana* is which is neither fully excised nor fully incised but have *lakshanas* of both and is *vishama*.

Lacerated wound: It has ragged edges with some part of the tissues getting devitalized; viability of the tissues may be impaired; depth of the injury and tissue damage should be carefully assessed. Proper adequate wound excision, thorough

warm saline wash and suturing of the wound layer-by-layer is required.

5. *Picchita* (Crushed wound)

^izgkjihMukH;ke~ rq ;nvaxe~ i'Fkqrka xre~A
lkfLFk rr~ fifPpra fo|kUeTtjDrifjIyqre~AA lq0fp0 02@21

In this, a part of the body with the local bone gets crushed (eg. between the folds of a door) or gets swollen by a blow and is covered with blood and marrow.

According to *Acharya Sushruta*,^[10] *Vrana* which is caused due to *prahaara* or *peedana* and involves the *asthi*, *majja* and *rakta* is termed as *Picchita Vrana*.

According to *Astanga Sangraha*, It is the *vrana* where the body part is crushed by the injury and gets flattened along with the bone of the affected part. It is of two types –

- Savrana picchita* - here the body part is crushed, blood and marrow oozes out.
- Avrana picchita* - the bone is fractured and there is no external wound, *Harita Samhita* mentions the characters of such *Vrana* under the heading of *Doshaja vrana* or *Dushta vrana*.

Crushed wound: It is a type of injury characterized by damage to the skin and underlying tissues without a break in the skin's surface. It is due to blow or blunt force to the skin and tissues underneath wherein blood vessels or capillaries are damaged underneath. There is skin discoloration without breaking of the skin; broken vessels cause seepage of blood underneath; minor soft tissue injury crushes small vessels without breaking the skin, accumulating the trapped blood underneath. It is more common on the skin over the bones; lax areas like face, scrotum, eyes; vascular areas; children, elderly, and fair skin people.

6. *Ghrishta* (Abraded wound)

^ foxrRoX;n³~x fg la?k"kkZnU;Fkk~fi ok A
m"kkL=kokfUora rÜkq ?k"VfeR;qifn';rs A lq0fp0 02@22

In this type the skin is mainly affected due to friction or slight injury and it is called as abrasion. Burning sensation and a little secretion in the affected part is the characteristic of this type. According to *Acharya Sushruta*,^[11]

This *Vrana* is caused due to friction with rough surfaces which leads to loss of skin and is associated with *Daha* and *Srava*.

Abraded wound, also known as a scrape or abrasion, is a type of injury to the skin caused by friction or rubbing against a rough surface, resulting in the removal of the superficial layers of skin. It is superficial injury (scratch/graze/pressure/contact) and is due to shearing of the skin where the surface is rubbed off. This tangential force causes loss of epidermis exposing dermal vessels and nerves leading to profuse painful oozing. Abrasion heals by epithelialization. Any dirt or foreign body on the abrasion should be removed to avoid formation of poor tattoo like scar.

➤ *Vagbhata* gives a clear description of *Saddyo vrana* on the basis of their severity. They have been grouped into eight, even though they are unlimited. They are as follows:

1. **Ghrishta:** It is caused by slight injuries such as Abrasion through friction and is characterized with heat and secretion. Here the outer layer of the skin or the epithelium is ruptured with oozing out of *lasika* or *saraktha lasika*.
2. **Avakritta:** It is more deeply affected than *Ghrishta* and is characterized by discharge of blood.
3. **Vichinna:** It is deep injury to the internal organs.
4. **Pravilambi:** It is the injury deeper upto the bones. These are lacerated wounds which are mostly seen in clinical practice mainly caused by accidents and industrial injuries. The wounds are mainly due to blunt objects and are associated with a certain amount of tearing so that the edges and surfaces of the wounds are jagged and contain a moderate amount of de-vitalized tissues.
5. **Pathita:** Here a part of the body will be separated and have a break in the continuity.
6. **Viddha:** It is manifested by weapons having sharp edges which pierce on to the body except the region of *koshtha* (thorax, abdomen, bladder etc.).
7. **Bhinna:** It is the *vrana* produced by a sharp instrument piercing into the *koshtha*.
8. **Vidalita:** It is a particular type of *vrana* where impact of the injury causes crushing of the bones and soft tissues including the bone marrow and blood. It not only extends to the deep structures but is extended widely also.

General Line of Management ^[21,22,23]

The first aid in *Ayurveda* aims at palliating the heat of *Pitta* and control of *Raktasrava*. The methods adopted for *Vatashamana* was mainly the use of *Snehas*. To combat this involvement of *doshas* the use of *dravyas* with a right blend of *Kashaya*, *Madhura*, *Sheeta* and *Snigdha gunas* was formulated by our *Acharyas*. A unique concept of *Raktastambhana Upaya* namely *Sandhana*, *Skandana*, *Pachana* and *Dahana* for the cessation of bleeding became an adjunct for the same.

Chaturvidha Raktastambhana Upaya^[24]

S.No.	Upaya	Modality	Dravya used
1.	<i>Sandhana</i>	using <i>Kashaya</i>	<i>Lodradi</i> , <i>Haritakyadi</i> , <i>Panchavalkaladi varga</i>
2.	<i>Skandana</i>	using <i>Hima</i>	<i>Sheeta dravyas</i>
3.	<i>Pachana</i>	using <i>Bhasma</i>	which is <i>Kshoumadi janita</i>
4.	<i>Dahana</i>	using <i>Shalaka</i>	for <i>Sirasankocha</i>

Samanya Lakshana of Saddyo vrana

fNUus fHkUus rFkk fo)s {krs ok'l'xfrL=osr~ A jä{k;kuqtLr=djksfr iouks Hk'ke~ A lq0fp0 2@23
fifPprs p fo"?k'"Vs p ukfrL=ofr 'kksf.kre~ A vxPNfr Hk'ka rFlEu~ nkg% ikd'p tk;rs AA lq0fp0 2@26 *Acharya Sushruta* explained that in *Chhinna*, *Bhinna*, *Viddha* and *Kshata* type of *Saddyo vrana*, there will be excessive *Raktasrava* due to which there is *Vata Prakopa* resulting in *Ruja* (pain), whereas in *Picchita* and *Ghrishta* type of *Saddyo vrana* there is *Alpa Raktasrava* (less bleeding), *Atyarthi Daha* (burning sensation) and *Paaka* (suppuration).

General Management

Lusgikua fgra r= rRlsdks fofgrLrFkk A os'kokjS% l—'kjS% lqfLuX/kS'pksiukgue~ AA

/kkU;Losnkj'p dqohZr fLuX/kkU;kysiukfu pA
okr?ukS"k/kflCcS'p LusgScZfLrfoZ/kh;rs AA lq0fp0 2@24,25
r=ks"e.kks fuxzgzFkaZ rFkk nkgçikd;ks% A 'khrekysiuA dk;Z
ifj"ksd'p 'khry% AA lq0fp0 2@27

- In circumstances of severe bleeding, in any kind of *Vrana* whether *Chhinna*, *Bhinna*, *Viddha* or *Kshata*, *Vata* gets aggravated due to loss of blood, resulting in severe pain. In this condition, *Snehan* with *Vasa*, *Taila* or *Ghrita* along with *Seka* is beneficial.

Also, *Upnaha* (warm poultice) either from *Veshavara* or *Krishra* along with *Vasa* may be applied. Moreover, *Swedan* with *Dhanya*, application of *Snigdha Lepa* and administration of *Vata* mitigating *Sneha Taila Basti* can be done.

- In *Picchita* and *Ghrishta Vrana*; blood doesn't flow out due to stasis, causing severe burning sensation and formation of pus. Then, in order to mitigate the burning sensation and pus formation, *Sheeta Lepa* and *Parisheka* should be applied on *Vrana*.
- In *Saddyo Vrana*, in case of intense pain, *Koushna Bala taila* should be poured on *Vrana* and to prevent the heat of the *Vrana*; *Kashya*, *Sheeta*, *Madhura Lepa* can be applied.
- In all types of *Vrana*, *Snehan* with *ghrita* prepared from *Madhuyashti Churna* should be done for healing.

Vishesha chikitsa

A. Chhinna Vrana

- The ear which has displaced should be replaced in its usual site, sutured and dressed. *Karna puran* to be done in the ear with the *Vataghna Aushadhi*.
- If *Greeva* is cut upto the the end of the *Krikatika* (Posterior aspect of neck) and *Vayu* is coming out, then *Greeva* should be replaced properly, sutured and bandaged. Then *Parishek* should be done in that area with *Aja Ghrita*.
- When the extremity has completely separated, then the surgeon should burn the *Vrana* by *Ushna Tail* and apply *Kosa Bandha*.
- *Chandan*, *Padmaka*, *Rodhra*, *Utpala*, *Priyangu*, *Haridra*, *Madhuk*, *Milk* are all cooked with milk and oil which is called "Chandanadi oil". This oil is best for healing of *Vrana*.

B. Bhinna vrana

- Eye which has not been punctured, *Tarpan* should be done (filling the eye with *Ghrita*) and the same *Ghrita* should be used for *Nasya Karma*.
- When *Medovarti* (Omentum) comes out of the abdomen, it should be smeared with *Kashaya Bhasma* and *Krishna Mritika Powder*, ligated, then excised, using *Madhu* coated *Agnitapta shastra*, followed by bandaging. After the patient has digested the food properly, he should be given *Ghritpana*. Apart from *Snehpana*, milk should also be given. Milk prepared with *Sharkara*, *Mulethi*, *Lakh*, *Gokhru* and *Eranda*, relieves pain and burning sensation.
- If haemorrhage is in the *Amashaya*, then *Vaman* therapy is beneficial. If haemorrhage is in the *Pakvasaya*, *Virechana karma* is done.

- When the *Andkosh* (testis) has been protruding out partly, then the testis and the eye both should be sprinkled with water; the testis should be pushed inside, and the *TunnseSivan Karama* and *Gofnika bandh* should be applied, and the medicated oil should be used for healing the wound.

C. Picchita, Ghrishta vrana

- For *Picchita Vrana*, treatment should be the same as *bhagna chikitsa*.
- For *Ghrishta Vrana*, pain should be mitigated quickly and the *Vrana* should be treated using *bala taila*, *samangadi taila*, etc.

DISCUSSION

Saddyo vrana are caused due to various *Agantuja* factors. The clinical signs and symptoms depend upon the structure involved in the injury. The shape of the *Vrana* mentioned in the classics as well as the as contemporary science depends on the injury caused by sharp instruments. *Tridosha Siddhanta*, being the central concept of *Ayurvedic* medicine, is intended to normalize *Vata Dosha* along with *Raktastambhana*. *Ayurveda* and contemporary science both have the intention of achieving hemostasis, but the postulation of *Raktastambhana Upaya* in the form of *Kashaya*, *Hima*, *Bhasma*, and *Agnikarma* is exclusive to *Ayurveda*, and the concept of *Vata shamana* with *Sneha*, both externally and internally in the form of *Paana*, *Basti*, *Seka*, *Upanaha* and *Lepas* in the management of *Saddyo vrana*, is noteworthy.

CONCLUSION

While debating “*Vrana*”, *Acharya Sushruta* did not limit the *Vrana* to only cutaneous tissue but made it clear that any damaging lesion in any body tissue is known as *Vrana*. *Vrana* is an important topic of *Shalya tantra* due to its involvement in many surgical conditions and the general line of management mentioned about *Saddyo vrana* can be adopted for all types of *Agantuja Vrana*. *Acharya Sushruta* has classified *Saddyo vrana* into six specific categories. However, a different approach was developed by *Astanga Hridaya* and *Astanga Sangraha*. But these classifications fit into the basic six types of *Saddyo vrana* of *Sushruta*.

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