



**A CONCEPTUAL STUDY OF CHINNA VRANA AS SADYOVRANA W.S.R TO
MUSCULO-SKELETAL INJURIES.**

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ABSTRACT

Sadyovrana can be correlated to traumatic wounds, mostly occurs due to accidental injuries. In today's era the number of major and minor injuries has increased. *Acharya Sushruta* has given superior position to *Vrana*. In *Sutrasthana* of *Sushruta Samhita* description of *Vrana* is mentioned and *Chikitsa sthana* begins with chapter of *vrana*.^[1] *Shalyatantra* mentions very clearly that *vrana* is the most important surgical entity, regarding its knowledge and effective management for a surgeon is the basic skill required. The destruction of body tissues and formation of scar after healing is called *vrana*.^[2] According to *Ayurvedic classics* *vrana* is classified in to two such as *sharirika (nija)* and *sadyovrana (agantuja)*.^[3,4,5,6] *Sadyovrana* is the fresh wound produced due to trauma either accidental or surgical or because of external objects,^[7] which is in different size and structure.^[8,9,10,11,12] The *sadyovrana or agantu vrana* affected with dosha become *nija vrana* after 7 days.^[13,14,15]

KEY WORDS: *sadyovrana, chinna vrana, wound.*

INTRODUCTION

Sadyovrana is a sudden/unexpected trauma which may result in loss of superficial body surface or part of the body. Few of the penetrating wounds may prove fatal with bad prognosis. Injury is the adverse effect of a physical force upon a person. The subject of trauma therefore depends upon the force of the weapon.

सद्योव्रणा ये सहसा सम्भवन्त्यभिघाततः।^[16] *Sadyovrana* are those which occur suddenly due to trauma or injury. *Vrana* due to sudden injuries like accidents, war injury, and trauma by blunt or sharp objects is called as *Sadyovrana*. It is a type of *Agantuja Vrana*.

AGANTUJA VRANA KARANANI

Acharya Sushruta mention the causes such as *abhighata* (trauma) by *purusha* (human), *pashu* (animals), *pakshi* (birds), *vyala* (tiger), *agni, kshara, shrunga* (horn), *visha* (poison), *tikshna aushadhi* etc.^[17] Based upon impact of instruments (*vrana karana*) like *nana shastra dhara, nana shastra mukha, nana deha sthana* produces *nana rupa vrana*.^[18]

AGANTUJA VRANA AKRUTI

Long (*Ayata*), square (*chaturasra*), triangular (*tryastra*), round (*mandala*), semilunar (*ardhachandra*), broad (*vishala*), irregular (*kutila*), centrally depressed (*sharava ninnamadhya*), centrally elevated (*yava Madhya*).^[19]

Acharya Sushruta has mentioned the six types of *agantuja vrana* in *Sushruta chikitsa sthana* such as *Chinna vrana* (excised wound), *bhinna vrana* (stab wound), *viddha vrana* (punctured wound), *kshata vrana* (traumatic wound), *picchita vrana* (lacerated wound) and *ghrusta vrana* (abrasions and bruises).^[20]

SAMANYA LAKSHANA OF SADYOVRANA^[21]

In *chinna, bhinna, viddha* and *kshata vrana* the symptoms like *rakta atisravana* (excessive bleeding). In *picchita* and *ghrusta vrana* there will be *shonita natisravana* (no excessive bleeding).

Chinna vrana:- Wound caused due to any sharp instrument which may be oblique or straight affecting a larger body surface which may also results in total excision of body part is known as *chinna vrana*.^[22]

*Chinna vrana*

Bhinna vrana: - Any viscera punctured by the sharp tip of instrument like dagger, spear, lance etc. resulting in exudation of fluids are the features of the *Bhinna vrana*.

*Bhinna vrana*

Viddha vrana :- Any part of the body except the viscera, injured by weapons or foreign bodies which may cause elevation, such a wound is known as *Viddha vrana*.

*Viddha vrana*

Kshata vrana :-Wound which is neither excised or incised, but having the symptoms similar to chinna and bhinna vrana, with irregular wound edges (विषम) is known as *Kshata vrana*.

*Kshata vrana*

Picchita vrana :-Any part of the body which is injured by *prahara*, *pidana* which may involves the bone along with *majja* and *rakta* is known as *picchita vrana*.

*Picchita vrana*

Ghrusta vrana:- Any part of the body get injured by rubbing on rough and hard surfaces which leads to skin loss accompanied with *daha* and *srava*.



Ghrusta vrana

Acharya Vagbhata explains 5 types of *chinna vranas*^[23] such as घृष्ट, अवकृत, विच्छिन्न, विलम्बित, पातित. In *ghrusta vrana* (In this condition only the skin is excised), *avakruta vrana* (Partially excision of the *mamsa*), *vichinna vrana* (Deep seated injury involving larger part of the *mamsa* and *snayu*), *vilambita vrana* (Wound which causes drooping or hanging of the injured body parts, that is *twak*, *mamsa*, *snayu* and *asthi*), *patita vrana* (Total separation of injured structures from the body).



Ghrusta vrana



Avakruta vrana



Vichinna vrana



Vilambita vrana



Patita vrana

Samanya chikitsa^[24]

In *chinna*, *bhinna*, *viddha* and *kshata vrana* there will be *atirakta sravana* (excessive bleeding) → *rakta kshaya* → *vata prakopa* → *teevra vedana*. So the treatment opted are *snehapana*, *koshna sneha seka*, *veshawara*, *krushara*, *snigdha upanaha-bandhana*, *mashadi kosha dhanyamla sweda*, *snigdha alepana*, *vataghna aushadha siddha sneha basti*.

In *picchita* and *ghruta vrana*, there will be *na atirakta srava* (no excessive bleeding) → *daha*, *paka*. So the treatment opted are *sheeta alepana* or *sheeta parisheka*.

Types of traumatic injuries^[25]

A. Closed wounds: - Contusion, Abrasion, Hematoma.
B. Open wounds: - Incised, Lacerated, Crushed, and Penetrating.

Incised wound

Caused by sharp objects like knife, blade, glass, etc. Wound has a sharp edge and less contaminated. Primary suturing is ideal for this type of wound.

Lacerated wound

Caused due to fall on a stone or due to RTA. The edges of wounds are uneven. Injury may involve only skin and subcutaneous tissue or sometimes deeper structures also. These wound are treated by wound excision and primary suturing.

Penetrating wound

Stab injuries of the abdomen are very notorious, looks like an innocent injury with a small, one or two cms long cut but internal organs like intestines, liver, spleen or mesenteric blood vessels might have been damaged. All penetrating wounds of the abdomen should be admitted and observed for at least 24 hours. Layer by layer exploration and repair is recommended.

Crushed/Contused wounds

Caused by blunt trauma due to run over by vehicle, wall collapse, earth quakes or industrial accidents. Wounds are dangerous as they may cause severe hemorrhage, death of the tissue and crushing of the blood vessels. Prone for gas gangrene, tetanus etc. Adequate treatment involves a good debridement and removal of all dead and necrotic tissue.

Investigation

X-RAY, CT SCAN, MRI, DOPPLER STUDY, BLOOD INVESTIGATION LIKE GROUPING, RBS.

Specific management of chinna vrana

1. In *sushruta samhita chikitsa sthana*, Acharya Sushruta mentioned that broad excised wound with the structures exposed should be replaced and to be sutured accordingly, later *bandhana* is done.^[26]
2. The injured part of the ear should be replaced in its own site, sutured & dressing done, the by using *taila karnapoorana* is advised.^[27]
3. Any injury extending from ear up to *krukatika*, leading to *vata dosha*. Structures are replaced in position followed by *seevana* & *bandana karma*. परिषेक with अजः घृत is advised. Patient is advised to be in lying posture in सुयंत्रित except for आहार सेवन and मूत्रपुरिषउत्सर्ग.^[28]

Injury of the atlas (c1 vertebra) Occurs by a vertical force there in no displacement and no injury to the spinal cord. Managed by traction followed by immobilization or by collar jacket.

4. Wounds of the extremities which are cut obliquely and wide open, then it should be sutured after replacing the structures in position. वेल्लितक बन्ध or गोफणा बन्ध should be applied, then *taila parisheka* is performed.^[29]

Injuries of the extremities (Assessment of Injury include):- Number, extent, depth, deformity and disability, neurovascular injuries, tendon, muscle, bone and joint injuries.

General symptoms:- Pain, Swelling, Discoloration, Temperature change, Numbness/tingling sensation, Loss of function.

General principles of treatment:- Haemostasis, wound debridement and cleaning, primary suturing if it is a incised wound, delayed primary suturing if there is odema, antibiotics and anti-tetanus treatment, skin grafting or flaps for skin loss, tendon suturing/tendon grafting for tendon injuries, rest and elevation of the affected parts, management of fractures by splint, wiring. Nerve repair for nerve injuries, immobilization up to 21 days, physiotherapy, amputation of digits only when inevitable.

5. Acharya Sushruta has told in general that when the wound is in the back, then the person should made to lie in supine position and when it is on the chest, he should made to lie in the prone position.^[30]

Thoracic and Lumbar spine injury:-

Symptoms:- Pain may be very slight without involvement of spinal cord but a mild compression fracture be noted. Neurological deficit may be noted with inability to move the limbs and loss of sensation.

Treatment:- Bed rest for 6 weeks, analgesic, immobilization, mobilization can be advised by the use of brace and rehabilitation till all function are achieve.

Rib injury:-

Symptoms:- Rib injury result in painful breathing and pain during coughing, tenderness noted in the injured part. It can be diagnosed by chest x-ray.

Treatment:- Fractured rib are treated with analgesic and rest. Most of the injury heal well with no problems.

6. Acharya Sushruta has mentined that when the extremity has been completely separated from the body, then the injured part should be subjected to *agnikarma* by *ushna taila*, then कोश बन्धन should be done.^[31]

Supportive Treatment:- Depending upon the condition of the patient. Blood transfusion, fluid replacement, treatment of infections.

DISCUSSION

Acharya Sushruta has explained 6 types of *vrana* encompassing almost all parts of the body and their probable causative agents or sharp weapons. All types of injuries are included in the 6 types of *sadyovrana*. Accidental injuries are described along with their management and with mentioning the use of *ushna taila* as a method for haemostasis in completely amputated condition. Trauma is usually the adverse consequence of a mechanical force on a patient. The prime importance lies in proper care of the patient. The cause of the type of trauma is becomes very evident for a definitive care for the injured patient. The plan of the treatment may also include different specialities like Orthopaedics, Neurosurgery etc.

CONCLUSION

In the olden days the causes of injury were due to war and attack by animal. In the present days injuries are caused due to vehicular accidents, fall, interpersonal assault and violence. The management of injuries mentioned in the classics are almost similar to the management in modern science. It is evident that *aatyayika chikitsa* was given prime importance during the time of Sushruta. All these are clear proofs to the expertise, skill of the ancient surgeons of India.

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