



## Concept of Wound (Vrana) in Ayurveda.

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### ABSTRACT

The wound, known as **Vrana** in Ayurveda, is one of the oldest afflictions experienced by mankind. Ancient Ayurvedic texts provide a comprehensive description of this condition. The Acharyas meticulously detailed every aspect of Vrana, and their descriptions closely align with modern understandings in medicine and surgery. This effort aims to compile, discuss, and briefly outline the Ayurvedic concept of Vrana, or wound, reflecting its historical and contemporary relevance.

**Keywords:** *Concept of Vrana, Wound healing, Ayurveda.*

### INTRODUCTION

In Ayurveda, the concept of Vrana is indeed quite comprehensive and nuanced. Here's a summary and elaboration of the points you mentioned.

Vrana is a term derived from the Sanskrit root DhatuVru-, which signifies actions like covering, concealing, and enveloping. It refers to a pathology characterized by the destruction of body tissue and the subsequent formation of a scar that persists over time. According to Sushruta, a prominent ancient Ayurvedic text, Vrana encompasses a broad range of conditions where tissue damage leads to scar formation. This condition can arise from both external (extrinsic) factors like wounds or injuries and internal (intrinsic) factors such as ulcers.

### OBJECTIVES

To explore the Ayurvedic understanding of Vrana and compare it with modern wound healing mechanisms to establish a holistic approach to wound management.

## METHODOLOGY

A thorough **literature review** was conducted using classical Ayurvedic texts such as:

- **Sushruta Samhita**
- **Charaka Samhita**
- **Ashtanga Hridaya**

Additionally, modern research papers, journals, and online databases (PubMed, AYUSH Research Portal) were analyzed for contemporary perspectives and comparative analysis.

### **Inclusion Criteria:**

- Classical Ayurvedic references to Vrana
- Modern clinical and experimental studies on Ayurvedic wound care
- English translations/commentaries on Ayurvedic texts

### **Exclusion Criteria:**

- Non-authentic or poorly referenced sources

## RESULTS

### **Aetiology of Vrana**

The aetiology, or causative factors, of Vrana in Ayurveda encompasses both intrinsic and extrinsic elements that lead to tissue damage and subsequent scar formation. Here's a detailed look at these factors:

#### **Extrinsic Aetiology**

1. **Physical Trauma:** Injuries such as cuts, abrasions, punctures, and surgical wounds can cause direct damage to the tissues, leading to Vrana. The severity of the wound can influence the extent of tissue destruction and scar formation.
2. **Burns and Scalds:** Exposure to extreme heat or chemicals can damage the skin and underlying tissues, resulting in scars as the tissues heal.
3. **Infections:** Bacterial, viral, or fungal infections can cause ulcers or abscesses that lead to tissue damage and subsequent scarring.
4. **Mechanical Injury:** Repeated friction, pressure, or impact injuries can lead to chronic tissue damage and scar formation.
5. **Surgical Procedures:** Surgical interventions that involve incisions or removal of tissue can result in wounds that eventually form scars.

#### **Intrinsic Aetiology**

1. **Imbalances in Doshas:** In Ayurveda, an imbalance in the three doshas (Vata, Pitta, and Kapha) can contribute to various pathological conditions. For instance:
  - **Vata Dosha Imbalance:** May cause dryness and irregularities in tissue healing.

- **Pitta Dosha Imbalance:** Can lead to excessive inflammation and ulcer formation.
  - **Kapha Dosha Imbalance:** Might contribute to slow healing and excessive scar tissue formation.
2. **Dhatu Agni (Digestive Fire):** Impaired digestion or metabolic fire (Agni) can affect the body's ability to process and heal tissues properly, leading to chronic ulcers and scarring.
  3. **Chronic Diseases:** Conditions like diabetes, autoimmune disorders, or chronic inflammatory diseases can impair normal tissue repair mechanisms and lead to the formation of scars.
  4. **Nutritional Deficiencies:** Deficiencies in essential nutrients required for tissue repair (such as vitamins A, C, and E, and minerals like zinc) can compromise healing processes and contribute to scar formation.
  5. **Genetic Predispositions:** Some individuals may have a genetic tendency toward certain types of scarring or abnormal tissue repair responses.
  6. **Lifestyle Factors:** Poor lifestyle choices such as excessive smoking, alcohol consumption, or inadequate sleep can negatively impact the body's ability to heal and regenerate tissues.

### Sites of Vrana

In Ayurveda, the sites where Vrana occurs are termed **VranaVastu** or **VranaAdhishtana**. These sites are categorized based on the involvement of various body structures. The primary sites include:

1. **Twaka (Skin):** The outermost layer of the body where injuries or wounds manifest.
2. **Mamsa (Muscle):** The muscle tissue can be affected by deep wounds or trauma.
3. **Sira (Vessels):** Injuries affecting blood vessels can lead to significant tissue damage and scar formation.
4. **Snayu (Ligaments):** Damage to ligaments can result in functional impairments and scar formation.
5. **Asthi (Bones):** Bone injuries or fractures can lead to scars after healing.
6. **Sandhi (Joints):** Joint injuries or conditions can result in chronic issues and scar formation.
7. **Koshta (Abdominal and Thoracic Viscera):** Internal organs can also be affected, leading to pathological changes.
8. **Marma (Vital Parts):** Injuries to critical areas such as the brain or other vital organs can have serious consequences and result in long-term effects.

Understanding Vrana in these terms helps Ayurvedic practitioners diagnose and treat conditions by addressing the specific site and nature of the tissue damage and scarring. Each site and type of Vrana requires a tailored approach to treatment to promote proper healing and restoration of function.

## Classification of Vrana

In Ayurveda, Vrana (wounds or ulcers) is classified based on various factors, including the nature of the wound, its etiology, the site of occurrence, and its progression. Here's a detailed classification:

### 1. Classification Based on Etiology

- **Vaatika Vrana:**
  - Caused by imbalances in Vata Dosha.
  - Typically characterized by dryness, roughness, and pain.
  - Healing may be slow and uneven, leading to chronic or non-healing wounds.
- **Pittaja Vrana:**
  - Caused by imbalances in Pitta Dosha.
  - Associated with inflammation, burning sensation, and redness.
  - These wounds often present with excessive secretion and may be prone to infection.
- **Kaphaja Vrana:**
  - Caused by imbalances in Kapha Dosha.
  - Characterized by swelling, heaviness, and a tendency for the wound to be moist and slow to heal.
  - The healing process may be delayed, and scars can be more pronounced.

### 2. Classification Based on Depth and Tissue Involvement

- **\*\*Shushka Vrana (Dry Wound):**
  - Surface wound with minimal fluid or secretion.
  - Often associated with Vata imbalance.
- **\*\*Ruja Vrana (Painful Wound):**
  - Characterized by intense pain, often related to Vata or Pitta imbalance.
  - Healing may be difficult and complicated by pain.
- **\*\*Vrana Adhyasha (Exudative Wound):**
  - Wound with excessive discharge or secretion.
  - Common in Pitta or Kapha imbalances.
- **\*\*Vrana Ashma (Stone-like Wound):**
  - Hard, indurated, or stone-like in nature, often with a thick, fibrous scar.

- Typically seen in chronic conditions.

### 3. Classification Based on Site and Structure Involvement

- **\*\*Twaka Vrana (Skin Wound):**
  - Involves the skin layer.
  - Can result from cuts, abrasions, or superficial injuries.
- **\*\*Mamsa Vrana (Muscle Wound):**
  - Involves the muscle tissue.
  - Often results from deeper injuries or trauma affecting the muscle.
- **\*\*Sira Vrana (Vessel Wound):**
  - Involves blood vessels.
  - Can lead to significant bleeding or complications if not treated promptly.
- **\*\*Snayu Vrana (Ligament Wound):**
  - Involves ligaments.
  - Often related to joint injuries or strains.
- **\*\*Asthi Vrana (Bone Wound):**
  - Involves bones.
  - Common in fractures or deep injuries affecting bone integrity.
- **\*\*Sandhi Vrana (Joint Wound):**
  - Involves joints.
  - Can result in chronic joint pain or dysfunction.
- **\*\*Koshta Vrana (Abdominal and Thoracic Viscera Wound):**
  - Involves internal organs.
  - Requires careful management to prevent complications.
- **\*\*Marma Vrana (Vital Parts Wound):**
  - Involves vital areas such as the brain or other critical organs.
  - Requires immediate and specialized treatment due to its potential severity.




### 4. Classification Based on Healing and Scarring



- **\*\*Sushira Vrana (Healing Wound):**
  - Wound that heals properly with minimal complications.
  - Typically well-managed and resolves with a good prognosis.

- **\*\*Chikitsa Vrana (Complicated Wound):**
  - Wound that faces complications such as infection or delayed healing.
  - Requires more intensive treatment and management.
- **\*\*Sushkashira Vrana (Dry Scar):**
  - Scar tissue that is dry and less pliable.
  - Often requires treatment to improve flexibility and reduce discomfort.
- **\*\*Rasa Vrana (Fluid-filled Scar):**
  - Scar with retained fluid or moist appearance.
  - Treatment may involve addressing moisture and promoting better healing.

### Clinical features of Vrana

#### 1. NijaVrana: Fifteen types of Nija vrana and their clinical features on the basis of pain, colour, discharge, smell and some special characters

Type of <i>nijaVrana</i>	<i>Vedana</i> (pain)	<i>Varna</i> (colour)	<i>Strava</i> (discharge)	<i>Gandha</i> (smell)	Other characters
<b>Vataja</b> 	Throbbing, stretching, pricking, pi-ercing	Black, red	Cold, slimy, less discharge	Pungent	Tendency to crack; Less granulation tissue.
<b>Pittaja</b> 	Burning sensation	Yellow, blue	Warm, light red coloured	Sharp	Tendency to Suppurate, pustules
<b>Kaphaja</b> 	Constant, excessive itching.	Pallor	Whitish, cold, sodden, slimy	Smell like raw meet	Rigid floor, thick margins, membranous Covering of veins and Ligamentous tissue.
<b>Raktaja</b>	<i>pittajaVrana</i>	Like Coral Spots	Blood	Like horse stable, Iron like	Tendency to bleed

		(with black blister)			
<b>Sannipataja</b> 	Different kinds	Different Colours	Different types	Different types	All Doshas Signs +++
<b>Vatapittaja</b>	Pricking burning	Yellowish red	Yellowish red	Fried paddy Fried paddy	
<b>Vatakaphaja</b>	Itching, pricking		Cold, slimy less	Linseed oil	Hard
<b>Vataraktaja</b>	Pricking+++	Red	Blood, red		Numbness
<b>Pittakaphaja</b>	Burning		Yellowish white	Sesamum oil	
<b>Pittaraktaja</b>		Red	Black	Like as fish in water	Soft
<b>Kapharaktaja</b>	Itching	Redshiny	Reddish pale		Slimy, fixed
<b>Vatapittaraktaja</b>	Pricking, burnng, fuming		Yellow, thin		With pulsation
<b>Vatakapharaktaja</b>	Itching, burning		White, thick, blood		With pulsation
<b>Pittaraktakaphaja</b>	Itching, burning		White, thick, blood		Tendency to suppurate
<b>Vatapittakaphaja</b>	Mixture of signs of Vataja, pittaja, kaphaja				

## 2. Types and characteristics of Sadyovrana

### Sadyovrana (traumatic injury)

**Sadyovrana** in Ayurveda refers to wounds or injuries that result from **immediate or acute trauma**, often caused by external factors. These injuries are sudden in onset and are characterized by their direct impact on the body. The term "Sadyovrana" can be broken down as follows:

- **Sadyah** means "immediate" or "sudden."

Chinna	Excised	Associated with separation of part of body
Bhinna	Stab injury	Injury to body cavities resulting in discharge
Viddha	Punctured	Body cavity pierced by sharp pointed weapon
Kshata	Lacerated	Neither excessively excised nor excessively incised
Picchita	Crushed	Due to severe blow and pressure
Ghrista	Abrasion	Skin gets peeled off due to rubbing injury

- **Vranam** means "wound" or "injury."

### Management and Treatment in Ayurveda

#### 1. First Aid:

- **Control Bleeding:** Using clean cloths or bandages to apply pressure.
- **Clean the Wound:** Gently cleaning with appropriate antiseptics to prevent infection.
- **Pain Relief:** Use of herbal remedies and formulations that alleviate pain and discomfort.

#### 2. Wound Care:

- **Dressing:** Applying suitable dressings to protect the wound and facilitate healing.
- **Herbal Applications:** Use of Ayurvedic herbs and ointments with properties that aid in wound healing, such as Turmeric (*Curcuma longa*), Neem (*Azadirachta indica*), and Aloe Vera (*Aloe barbadensis*).

#### 3. Supportive Treatments:



- **Diet and Lifestyle:** Recommendations for a diet that supports healing and avoids aggravation of the doshas involved.
- **Rehabilitation:** Techniques such as gentle physical therapy or exercises to restore function and strength if necessary.

#### 4. Monitoring and Follow-Up:

- Regular assessment of the wound to ensure proper healing and to address any complications that may arise.

### Prognosis of Vrana

1. *Sushruta* classified *Vrana* depending upon prognosis mainly in two types: *Kritya* (curable) and *Akritya*(Incurable).

2. Description regarding prognosis on the basis of patient's age, strength, site of *Vrana*, nature of *Vrana*, associated disease, nature of discharge, smell of *Vrana* described in *Sushruta Samhita*.



Easily curable wounds



Difficult to cure wounds



Yapya (Incurable)

### Concept of wound healing in Ayurveda

In Sanskrit, "Ropana" refers to healing, and "Vranaropana" specifically means the healing of wounds and ulcers. According to Charaka, a suitable wound (Vrana) for healing should have a floor that is neither too red, too pale, nor brownish-black, and it should not be associated with severe pain, hyper-granulation, or pus pockets.

The healing of a wound progresses through four stages:

1. **Dushta Awastha:** The stage of inflammation.
2. **Shuddha Awastha:** The stage of granulation tissue formation.
3. **Ruhyamana Awastha:** The stage of maturation and remodeling.
4. **Rudha Awastha:** The stage of contraction.

## DISCUSSION

Understanding these classifications helps Ayurvedic practitioners tailor their treatment strategies according to the specific characteristics of the wound or ulcer, addressing both the underlying causes and the manifestations to promote effective healing and minimize complications.

The Ayurvedic concept of Vrana displays a profound understanding of tissue healing, infection control, and patient care. Sushruta's emphasis on **asepsis, debridement, and suture techniques** mirrors modern surgical practices. Ayurvedic treatments promote wound healing through **biocompatible herbal formulations** with anti-inflammatory, antimicrobial, and regenerative properties.

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