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REVIEW STUDY OF WOUND MANAGEMENT PROCEDURE ACCORDING TO AYURVEDA WSR TO VRANA

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ABSTRACT

Wound Care is a major health care concern that affects many individuals with different types of wounds and consumes vast resources. Wounds have varying effects on the quality of life of those affected, their families and caregivers. Providing skin and wound care is a major common consideration in the day to day caring of patients with wounds whether in acute, long term or community based environment. For the past two decades, many changes have occurred in the art of science on how wounds are managed. There has been great advancement in wound technology, research and development of sound policies and standards of care based on research and clinical evidence to achieve positive outcomes in wound healing. Successful wound management greatly depends on the collaboration and the integration of an inter-multi disciplinary health care team approach. Achrya Susuruta has explained wound management in detail in their text book sushuruta Samhita. In this review study wound management has been explained in detail according to ayurveda as well as modern science.

KEYWORDS:- Wound, *Vrana*, *Ayurveda*, *Sushuruta.*

INTRODUCTION AND BACKGROUND

Wound Care is a major health care concern that affects many individuals with different types of wounds and consumes vast resources. Wounds have varying effects on the quality of life of those affected, their families and caregivers. Providing skin and wound care is a major common consideration in the day to day caring of patients with wounds whether in acute, long term or community based environment.

The wound care manual will

- Provide a full understanding of the wound healing process and how this affects patients general state of health.
- Identify risk factors affecting the wound healing and delaying process.
- Focus and apply the wound care principles based on evidence best practices.
- Identify/adapt strategies/measures in preventing wound re-occurrences.
- Increase knowledge on building technical skills about wound assessment and documentation.
- Familiarize with the current, innovative wound care technology.
- Select and apply the appropriate products pertinent to all types of wounds.
- Promote ongoing wound care education programs.
- Gain self-empowerment.

For the past two decades, many changes have occurred in the art of science on how wounds are managed. There has been great advancement in wound technology, research and development of sound policies and standards of care based on research and clinical evidence to achieve positive outcomes in wound healing. Successful wound management greatly depends on the collaboration and the integration of an inter-multi disciplinary health care team approach.

Vrana in ayurveda

- Vrana is so called because it covers the destructed site and even after complete healing scar remains for the life time.
- व्रण गात्र विचूर्णने, व्रणयतीति व्रणः। (सु.चि.1/6)[1]
- सवर्णोति आच्छादयति यस्माति तस्माति व्रणः।

Wound healing

The normal phases of wound healing are described. Factors that may interfere with the wound healing process are also discussed. Wound healing is a complex series of events that begin when an individual develops a wound. Regardless of the nature of a wound, the same healing steps occur. A wound moves through a series of phases as it heals and the clinician's role is to support the wound healing process through proper assessment and treatment.

Physiology of wound healing

There are four phases of normal wound healing. They are:

1. Hemostasis
2. Inflammatory Phase
3. Proliferative Phase (Comprised of granulation and epithelialization)
4. Maturation Phase (Also called reconstruction or re-modeling phase)

Hemostasis

Hemostasis begins immediately upon wounding. The body's natural defences try to control bleeding first by constricting the local blood vessels, and then by creating a plug with circulating platelets. This temporary plug is later replaced by a more durable fibrin clot. This process is quick, occurring over several hours.

Inflammatory phase

Inflammation is commonly referred to as the clean-up period. White blood cells (neutrophils and macrophages) invade the wound. Dead tissue, debris, and bacteria are first digested by these cells. Growth factors and other chemical messengers are then released. This starts the healing process.

Proliferative phase

The process of "new" tissue growth or proliferation is subdivided into two phases depending upon the depth of injury: Granulation and Epithelialization.

Granulation

All partial and full thickness wounds heal by the process of granulation**.** The epidermal layer has been destroyed so the natural healing process originates from dermal cells (Fibroblasts) in the wound bed and periwound margins. A new layer of protein (Collagen) is deposited in the wound space. Because of the extent of the damage new blood vessel growth (angiogenesis –

Endothelial cells) is required to bring the needed nutrients for healing to the area. Granulation will usually begin within 12 - 48 hours after the initial injury when hemostasis is complete and the inflammatory phase has subsided. This process can be very long, occurring over several months for full thickness wounds. However, only a minimal amount of granulation or the growth of scar tissue is required to fill a partial thickness wound, thus the granulation phase will be much shorter. Granulation, also called scar tissue, is relatively a vascular and is thus different in texture, appearance, and functions of normal skin.

Epithelialization

Superficial wounds heal by Epithelial Regeneration. The natural process of epidermal cell keratinocytes growth and differentiation will result in the resurfacing of the wound with natural skin. The growth originates from keratinocytes in the wound bed, periwound margins, and from islets of epidermal cells (e.g. hair follicles, sweat glands) that remain scattered in the wound tissue. Regeneration will usually begin within 12 – 24 hours after the initial injury, when hemostasis is complete and the inflammatory phase has subsided. Because the damage is not too extensive the wound will regain near normal appearance and strength. The process is usually complete in 3 - 4 weeks.

Maturation phase

The maturation phase, also known as reconstruction or remodeling, may take up to two years to complete. Newly formed scar tissue realigns its internal structure to increase its durability. The collagen deposits bundle up to increase the tensile strength of the wound. New tissue is quite fragile at this point in time and can be reinjured easily. The healed wound will only regain up to 80% of its original strength.

Types of vrana (Wound in ayurveda)

1. **Acharya charak** has classified vrana in two types:[2]

- **Nija vrana**
- **Aagantuj vrana**

2. **Acharya sushurta** has classified vrana in two types:[3]

- **Sharir vrana**
- **Aagantuj vrana**
- The nija variety originated due to the changes of the dosic equilibrium and this type of vrana are of five types as vataja, pittaja, kaphaja, raktaja and sannipataja.

- The agantuja type of vrana ususally arises due to the external traumatic injury.
- Vranas are again classified into two on the basis of the dosha dushti,
- They are **dushta vrana** and **shudha vrana**.
- Vranas having more dosha dushti is called as dushta vrana and those having less or no dosha dushti are called as shudha vranas.
- Another type of vrana is the sadhyo vrana which is manifested by external causes. They include accidental wounds or traumatic wounds and surgical wounds. So these sadyovranas can also be called as aganthujavranas or sudhavranas.
- They cannot be called as an ulcer because the inflammatory swelling and the suppurative processes are absent here. They can be correlated with "wounds" described in modern science.

- **Classification of nijavranas**[4]

There are 16 types of nija vranas according to acharya sushruta and vagbhata10. They are as follows:

1.Vataja 2.Pittaja 3.Kaphaja 4.Raktaja 5.Vatapittaja 6.Vatakaphaja 7.Vataraktaja 8.Pittakaphaja 9.Pittaraktaja 10.Kapharaktaja 11.Vatapittaraktaja 12.Vatakapharaktaja 13.Pittakapharaktaja 14.Vatapittakaphaja 15.Sannipataja 16.Shuddhavrana

Types of wound healing

Types of healing	Description
Primary	In primary closure, such as with a surgical incision, wound edges are pulled together and approximated with sutures, staples, or adhesive tapes, and healing occurs mainly by connective tissue deposition. Epithelial migration is shortlived and may be completed within 72 hours. Within 24 - 48 hours, epithelial cells migrate from the wound edges in a linear movement along the cut margins of the dermis.
Secondary	In wounds that heal by secondary intention, wound edges are not approximated, and healing occurs by granulation tissue formation and contraction of the wound edges.

Tertiary	Wounds healing by tertiary intention (delayed primary intention). The wound is kept open for several days and the superficial wound edges are then approximated, and the center of the wound heals by granulation tissue formation.

Factors affecting wound healing

Many factors affect wound healing. The clinician's role is to assess these factors and intervene or suggest to patients interventions or modifications that may assist in wound prevention and wound healing.

Smoking – 80 - 90% of people who have Peripheral Arterial Disease (PAD) report a history of tobacco use. Nicotine and its primary metabolite, cotinine, have serious effects on Endothelial injury, arthromatous lesion growth, smooth muscle tone and blood viscosity. Carbon monoxide binds to haemoglobin in place of oxygen, significantly reducing the amount of circulating oxygen, which can impede healing.

Stress **–** Stimulates the nervous systems to vasaconstrict peripheral blood vessels which ultimately can decrease tissue perfusion. Stress also increases the amount of circulating natural steroids that can decrease the inflammatory response and slow the growth of fibroblasts and keratinocytes.

Hypertension **–** In particular systolic hypertension is the second most predictive risk factor for PAD.

Metabolic disorder – A number of metabolic disorders can impair wound healing capacity.

Medications – Such as steroids can reduce the inflammatory response and suppress granulation. Chemotherapy and radiotherapy can affect the integrity of the adjacent cells which play an important role in proliferation. These treatments can also deplete essential immunologic agents, energy and oxygen sources including RBCs. Vasoconstrictors can limit the amount of circulatory volume available to healing tissue.

Nutrition – Normal healthy skin integrity is promoted by adequate dietary intake of protein, carbohydrate, fats, vitamins, and minerals. If skin becomes damaged, an increased dietary

intake of some substances, such as Vitamin C, for collagen formation may be indicated and beneficial. Refer to Section 3 for more detailed information on nutrition.

Surgery – Certain anaesthetic agents cause vasodilatation that restricts the skin's natural ability to alter the diameter of peripheral blood vessels thus controlling thermoregulation. As a consequence, excess amounts of body heat can evaporate. Post operatively these clients can go into a phase of excess shivering. This reduction in body heat may influence healing. The use of warm blankets is critical to limit the amount of heat loss.

Alcoholism – Can impair liver functioning subsequently altering the production of protein and other essential elements needed for tissue repair.

Nutritional factors in wound management

Prevention and treatment of nutritional deficiencies are critical in maintaining skin integrity, promoting tissue restoration and reducing wound complications. Malnourished patients are at greater risk for complications including longer length of stay and more infections leading to increased health care costs. Any strategy for wound management will not be effective unless nutritional deficiencies are corrected. A complete nutrition assessment by a registered dietitian should be an integral part of the evaluation of patients identified at risk for skin break down as well as those with existing wounds.

Biology of wound healing

Wound healing and tissue repair go through complex, multi-step processes, which include inflammation, collagen metabolism, wound contraction and epithelialization. An understanding of the nutrient utilization in each of these steps is helpful while assessing patients with wound complications and establishing care plans.

Injury--------→ Inflammation--------→ Collagen Metabolism------→ Wound Contraction--------→ Epithelialization

Specific nutritional requirements

Role of specific nutrients in wound healing		
Nutrient	**Function**	**Deficiency Effect**
Protein/ Amino Acids	Required for cellular synthesis and cell proliferation □ Maintain tissue integrity	fibroblast proliferation, and collagen synthesis □ Impaired immune response

	Antibody production, resistance to infection □ Formation of granulation tissue/fibroblastic proliferation □ Collagen metabolism	□ Decreased skin elasticity and resiliency making it susceptible to injury
Carbohydrate	Energy source for tissues □ Essential for white blood cell Function	Decreased energy for cellular metabolism causing protein breakdown for energy rather than wound repair □ Altered white blood cell function
Fat	Membrane synthesis and Proliferation	Decreased tissue repair
Vitamin A	Enhance fibroplasia and collagen synthesis □ Maintain normal humoral mechanism □ Counteract effects of steroids by reversing the effect on lysosomal membrane	Decreased collagen synthesis □ Decreased ability to prevent infection □ Decreased ability to counteract the negative effect of steroids
Vitamin C	Cofactor in the hydroxylation of proline in collagen □ Enhance cellular and humoral Response	Altered collagen formation, delayed Healing
Thiamine	Energy metabolism related to cell Proliferation	Decreased cell proliferation and collagen metabolism
Vitamin K	Synthesis of clotting factors	Bleeding, hematoma and wound Disruption
Iron	Enzyme cofactors in collagen Metabolism	Anemia, hypoxia and hypovolemia
Copper, Mn	Enzyme cofactors in collagen Metabolism	Altered collagen formation
Water	Moist environment, electrolyte balance, faster epidermal cell migration	Tissue breakdown, decreased tissue perfusion, volume depletion

Zinc	Cofactor for the enzyme responsible for cellular proliferation Transcription of RNA	Decrease in enzyme production Altered cell replication

Principles of wound healing

1. Risk Assessment and Prevention
2. Wound Assessment
3. Wound Cleansing
4. Debridement
5. Identification & Elimination of Infection
6. Elimination of Dead Space
7. Absorption of Exudate
8. Promotion of Moist Wound Healing
9. Provision of Thermal Insulation
10. Protection of the Healing Wound

There are ten commonly accepted principles of wound prevention and healing. By applying each of these principles, the clinician implements appropriate interventions that will facilitate wound healing. By incorporating a holistic approach to the patient, an optimum wound healing environment will be achieved.

Risk Assessment and Prevention:- Determine the patient's level of risk and implement interventions to prevent development of pressure ulcers.

Wound Assessment and Documentation tool:- Complete the Wound Assessment Record when a wound is identified, and then in accordance with regional policies and procedures. The assessment will provide the clinician with the necessary information to implement interventions. This will help direct the appropriate intervention (for eg., wound bed dry – add moisture; or, wound is too wet – absorb exudate).

Goals for wound assessment

- Focus on the clinical status of the wound;
- Guide the appropriate intervention for the wound;
- Indicate that, if there is no change in wound status within a pre-determined timeframe, re-assess and alter the plan;

- Monitor and evaluate overall client outcomes (Progression or regression); and
- Determine the effectiveness of treatment.

Wound cleansing

The purpose of wound cleansing is to remove foreign debris and surface contaminants from the wound.

- Cleanse wounds with sterile water, normal saline, or pH balanced wound cleansers.
- Commercial wound cleansers contain surface-active agents to improve removal of wound contaminants.

Another form of wound irrigation is whirlpool. The whirlpool should only be used for wounds that contain slough and necrotic tissue. Once the necrotic tissue is removed, the whirlpool should be discontinued because it can damage granulation tissue.

Debridement

Wound healing cannot take place until necrotic tissue is removed. Debride when there is deep eschar, purulence, infection or a large area of necrotic tissue. Do not debride if the wound has healthy granulation tissue and no necrotic tissue.

There are several ways to debride a wound. The more common methods are autolytic, mechanical, chemical and sharp debridement.

Identification and Elimination of infection

There are four terms that the clinician should know when deciding whether a wound is infected. These terms are contamination, colonization, critical colonization and infection.

Difference between terms

Contamination: Presence of non-multiplying bacteria within a wound which accounts for the majority of the microorganisms present on the wound surface.

Colonization: Presence of bacteria which are multiplying but are producing no host reaction. This includes skin commeusals such as Staphylococcus epidermis and corynebacterium species, whose presence has been shown to increase the rate of wound healing.

Critical colonization: Refers to a wound in which the bacterial burden is rising due to multiplication of organisms which are now starting to cause a delay in healing. Critical

colonization initiates the body's immune response *locally* but not *systemically* and will have an effect on healing.

Infection: Refers to the presence of multiplying bacteria that are causing an associated host response. Pathogenic bacteria multiply and invade surrounding tissue resulting in host injury. If untreated, this may lead to systemic infection.

Elimination of dead space

Dead space refers to a hollow, cavity, or areas of tissue destruction underlying intact surface tissue as sinus tract formation. Dead space must be filled, though not overfilled, to promote healing and prevent premature closure of the wound. Wounds heal from the bottom upwards. Dead space provides a fluid medium for bacterial growth.

Absorption of exudate

Excess exudate at the wound bed can cause maceration and tissue damage. It can pool and promote bacterial growth. Excess exudate is detrimental to wound healing and requires removal to achieve the optimal wound environment for healing. More frequent dressing changes may be initially required. Change dressing before break-through of drainage. Choose an absorbent dressing and change the dressing before it becomes entirely saturated.

Promotion of moist wound healing

Maintaining a moist wound environment facilitates the wound healing process. Benefits associated with moist healing include:

- Increased rate of re-epithelialization – Wound healing is facilitated by a relatively hypoxic wound environment. Hydrocolloid dressings are capable of enhancing the process of angiogenesis. Moist wound healing helps to prevent crust formation, which leads to a faster epithelial migration across the moist wound bed.

  Bacterial barrier – occlusive dressings act as a barrier to keep environmental microorganisms from coming into contact with the wound.
- Decreased pain – local wound pain is significantly reduced in occluded wounds due to hydration of the wound by the dressing that insulates and protects nerve endings.
- Enhanced autolytic debridement – moist wound healing can assist in the painless debridement of wounds.

Promotion of thermal insulation

Wound healing is accelerated when the wound bed is kept warm at body temperature, therefore, frequent dressing changes should be avoided when possible. Evidence-based practice indicates that the natural healing process should be disrupted as little as possible.

Protection of the healing wound

Mechanical injury to the wound may occur because of shear, pressure or friction forces.

Interventions to prevent reoccurrence:

- Proper positioning and transferring techniques
- Pressure redistribution support surfaces to reduce or eliminate pressure
- Healed venous leg ulcers require compression hosiery for life
- Frequent educational updates for the client with diabetes with attention to:
- Proper foot wear
- Proper foot care
- Proper nail cutting
- Tight control of blood glucose, blood pressure, blood cholesterol and triglycerides
- Education to all clients and their caregivers on prevention of reoccurrence

Wound assessment record

Type of wound_____

Location of Wound _____

Present on Admission □ Yes □ No, Diabetic □Yes □No, Braden Score:__ Date:_____

Date of Initial Assessment _____Identify client specific factors that could influence wound Healing e.g. allergies, smoking, etc._____

Date			
Exudate	**Amt:** _ heavy _ mod _ light _ nil **Type:** _ serous _ serosanguinous _ purulent _ sanguinous _ tophi- other_____ **Odour:** _ none _ mild _ foul	**Amt:** _ heavy _ mod _ light _ nil **Type:** _ serous _ serosanguinous _ purulent _ sanguinous _ tophi _ other_____ **Odour:** _ none _ mild _ foul	**Amt:** _ heavy _ mod _ light _ nil **Type:** _ serous _ serosanguinous _ purulent _ sanguinous _ tophi _ other_____ **Odour:** _ none _ mild _ foul
Wound Bed	**Tissue type:** _ epithelialization _ granulation	**Tissue type:** _ epithelialization _ granulation	**Tissue type:** _ epithelialization _ granulation

	_ hypergranulation _ slough _ necrotic **Color:** _ pink _ red _ yellow _ black _ green _ other_____ **Friable**	_ hypergranulation _ slough _ necrotic **Color:** _ pink _ red _ yellow _ black _ green _ other_____ **Friable**	_ hypergranulation _ slough _ necrotic **Color:** _ pink _ red _ yellow _ black _ green _ other_____ **Friable**
Wound Edges	_ attached _ unattached Other_____	_ attached _ unattached Other_____	_ attached _ unattached Other_____
Periwound Skin	_ intact _ induration _ erythema _ maceration _ callus _ other_____	_ intact _ induration _ erythema _ maceration _ callus _ other_____	_ intact _ induration _ erythema _ maceration _ callus _ other_____
Wound Measure	Length _____cm width _____cm Depth _____cm	Length _____cm Width _____cm Depth _____cm	Length _____cm width _____cm Depth _____cm
Wound Pain	_ intermittent _ constant _ nocturnal _ at intervention _ other **pain scale**_____	_ intermittent _ constant _ nocturnal _ at intervention _ other **pain scale**_____	_ intermittent _ constant _ nocturnal _ at intervention _ other **pain scale**_____
Management Plan	**Infect. Suspected:** _ yes _ no **Swab c&s:** _ yes _ no	**Infect. Suspected:** _ yes _ no **Swab c&s:** _ yes _ no	**Infect. Suspected:** _ yes _ no **Swab c&s:** _ yes _ no
Dressing			
Signature			

Analog pain scale

0 1 2 3 4 5 6 7 8 9 10

No Pain Mild Moderate Severe Very Severe Worst

Possible pain

Examination of *vrana in ayurveda*[5]

- ***Pancha lakshanas* for examination:-** *Acharya* sushruta described local examination based on following parameters like *varna, gandha, srava, vedana* and *akriti.*

1. ***Gandha* (i.e. Smell):-** *Sushruta* has described *gandhas* according to dominance of *dosha* in *vrana*, these are as follows:

Dosh	Gandh
Vata	Katu
Pitta	Teekshana
Kapha	Aamgandhi
Rakta	Loha Gandhi
Vata-pitta	Laja Gandhi
Pitta-kapha	Atsi taila
Kapha-rakta	Til taila

Dosh	Colour of vrana
Vata	*Kapota, Bhasma Asthi, Parusha, Aruna, Krushna.*
Pitta & Rakta	*Peeta, Haritha, Shyaava, Krushna, Rakta, Kapila, Pingala.*
Kapha	*Sweta, Paandu, Snigdha.*
Sannipataj	*Sarva Varna.*

- And according to *charaka* there are eight types of *vrana* gandhas. These are as follows: *Sarpi, taila, vasa, puya, rakta, shyava, amla, putika.*

2. *Varna* i.e. colour

- Here color is important for the diagnosis of predominance of *dosha* and *avastha* of *vrana*.

3. *Srava* i.e. discharge

- The discharge from *vrana* is classified according to *dosha* predominance.

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

- ***Vrana srava* according to *sthana.***

Sthan	Srava
Twak	*Salila prakasha, Peetaavabaasa.*
Maamsa	*Sarpi prakasha, 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*

4. ***Vedna* i.e. pain:-** Vedana (Pain) in *vrana* is different according to *dosha* predominance.

Dosh	Vedana
Vata	*Todha, Bhedana, Chedana, Taadana, Manthana.*
Pitta	*Nirdahana, Sphotana, Kampana, Vidaarana.*
Kapha	*Kandu, Gurutwa, Suptata, Alpa Vedana.*
Rakta	Similar to that of *Pitta.*
Sannipataj	All types of Vedana.

5. ***Akriti i.e.* shape**

Shape of *vrana*

- Ayata (Elongated)
- Chaturastra (Square or rectangular)
- Vritta (Circular)
- Triputak (Triangular)

Shuddha vrana (According to ayurveda)[6]

- **Characteristic features of shuddha vrana by acharya sushurta**
- **जिव्हातलाभो मृदु: स्निग्ध: श्लक्षण विगत वेदन: सुव्यवास्थितो निर्स्रावश्चेती शुद्धो व्रण: इति** | सु. चि. १/७

अर्थात जिस व्रण में जिव्हातल के समान मृदु , स्निग्ध , अल्पवेदना , सुव्यवस्थित एवं निरस्त्राव ये लक्षण दिखाई देते है, उसे शुद्ध व्रण कहते है |

- **त्रिभिर्दोषैरनाक्रांत: श्यावोष्ठ पीडिकी सम:** |

अवेदनो निरस्त्रावो व्रण शुद्ध इहोच्यते || सु. सू. २३/१८

अर्थात शुद्ध व्रण में तीनो दोष का प्रकोप नहीं होता, ओष्ठ श्याव वर्ण के , पिड़की सम हो और अवेदना एवं अस्रावी हो |

- Acharya charak also describe the characteristic features of shuddha vrana:-[7]
- **नातिरक्तोनातीपांडू नातिश्यावो न चतिरुक** |

  न चोत्सान्नो न चोत्संगी शुद्धो रोप्य: परम् व्रण ||

Patradanam[8]

As Acharya Sushruta mentioned Shashti-upakrama in chapter one of Chikitsa sthanam of his Samhita in reference to management of Vrana. Among these shastiupkrama aarcharya sushruta describe Patradanam karma as well.

Patradanam is a kind of bandhan. Some chronic wound with fix and less fleshy areas are covered by some plants leaves poured with different Doshashamak drugs.

स्थिराणामल्पमांसानां रौक्ष्यादनुपरोहताम् |

पत्रदानं भवेत् कार्यं यथादोषं यथर्तु च ||

पत्रदान :- स्थिर, अल्पमांसवाले तथा रुक्षता के कारण न भरने वाले वर्णों में, दोषों और ऋतु के अनुसार पत्रदान (व्रण पर लेप लगा कर ऊपर पत्ता रखना) करना चाहिए |

१. वातज व्रण :-

एरण्डभूर्जपूतीकहरिद्राणां तु वातजे|पत्रमाश्वबलं यच्च काश्मरीपत्रमेव च||

रेंड, भोजपत्र, करंज तथा हल्दी कि पट्टी रखनी चाहिए|

२. रक्तपित्त व्रण :-

पत्राणि क्षीरवृक्षाणामौदकानि तथैव च |दूषिते रक्तपित्ताभ्यां व्रणे दद्याद्विचक्षणः||

अश्वबला, गंभारी, क्षीरवृक्ष(वट,गूलर) तथा ओदक(कमल) पत्तो का प्रयोग करना चाहिए |

३. कफज व्रण :-

पाठामूर्वागुडूचीनां काकमाचीहरिद्रयोः |पत्रं च शुकनासाया योजयेत् कफजे व्रणे ||

पाठा,मूर्वा, गिलोय, मकोय, हल्दी, शूकनासा आदि पत्तो का प्रयोग करना चाहिए|

अकर्कशमविच्छिन्नमजीर्णं सुकुमारकम्|अजन्तुजग्धं मृदु च पत्रं गुणवदुच्यते ||

जो पत्ता खुरदरा न हो, नया हो, पतला हो, कीड़ो से खाया हुआ नहीं हो तथा कोमल हो वह पत्रदान के लिये गुणकारी होता है |

स्नेहमौषधसारं च पट्टः पत्रान्तरीकृतः |नादत्ते यत्ततः पत्रं लेपस्योपरि दापयेत् ||

पत्तो को लेप के ऊपर रखकर पट्टी बाधने से स्नेह(शतधोत घृत) और औषधि का सार पट्टी में नहीं लगता इसलिए लेप के ऊपर पत्ता रखना चाहिए |

शैत्यौष्ण्यजननार्थाय स्नेहसङ्ग्रहणाय च |दत्तौषधेषु दातव्यं पत्रं वैद्येन जानता ||

शीतलता और उष्णता उत्पन्न करने तथा स्नेह को बचाने के लिये, विद्वान वैद्य को लेप के ऊपर पत्ता रखना चाहिए |

(su. Chi. Chatper 1/112-118)

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