

Standard Protocol and Research possibilities for Chronic Wound Management in Ayurveda and Modern Medicine

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Date of Submission: 01-01-2026

Date of Acceptance: 08-01-2026

ABSTRACT

The wounds which are excessively narrowed or wide in opening (floor), excessive indurated or very soft and loose, elevated or depressed along with discharge of pus and sloughing material causing pain, burning sensation, itching etc. and not healed for longer duration are called as dustavrana. The description of Dustavrana in terms of etiopathogenesis, clinical presentation, diagnosis and managements are identical with different types of chronic wound in modern era of surgical practice. Different modalities of debridement (VranaSodhan), wound bed preparation (VranaRopana) described in Sushruta Samhita required revalidation for use in modern era of surgical practice.

Keywords: Dustavrana, Chronic wound, Vranasodhan, VranaRopana

I. INTRODUCTION

Chronic wounds effect the socio-economic status of human beings due to functional loss as well as treatment cost for longer period. In Ayurveda different kinds of wounds are described in terms of vrana, which are mainly classified into nijavrana (endogenous cause) and agantujavrana(exogenous cause). When the wound takes a duration of more than 7 days to heal with discharge of pus, blood and pain called as dustavrana. Though in all ancient civilizations descriptions of wound and its management were found, it is observed that with the advancement of time, aetiology and treatment modalities change. In recent years scientists are understanding in better way regarding the etiological factor of chronic wound and its management.

II. MATERIAL AND METHODS

The etiological descriptions of vrana, its principles of management in Ayurveda is very much relevant and requires scientific revalidation. Then only it will be an usable asset in chronic wound management. Collection of different data

regarding vrana and dustavrana in different treatises of Ayurveda and its critical analysis is a demand of time so that the different modalities of treatment can be converted to practical application and scientifically used for the management of different kinds of chronic wound. Despite all the development in chronic wound management the main stumbling block in understanding of the etiopathogenesis and failure in orderly healing and costly treatment modalities. In standard protocol for research in wound following component required in the journey from in vitro, in vivo to real world clinical trial

A. Ethical consideration

- Informed consent
- Animal welfare
- Social impact
- Confidentiality
- Legal aspect
- Environmental safety
- Conflict of interest
- Financial liabilities

B. Study design

- Research question – Hypothesis
- Study type- observational, review, experimental, pre clinical, clinical, postmarketing survey
- Inclusion and exclusion criteria
- Material and method including sample size

C. Wound model for pre clinical study

- Animal model
- In vitro study

D. Wound assessment

- Comprehensive assessment of size of wound in length, breadth and depth.
- Histopathological assessment
- Microbiological assessment
- Healthy and unhealthy granulation tissue assessment
- Amount of exudate assessment

- f. Colour of the wound assessment
- g. Peri wound skin assessment
- h. Epithelilation over the wound assessment
- i. Digital assessment of wound

E. Outcome measures

- a. Patient information data analysis
- b. Healing of the wound and reduction or increase of size, discharge, pain etc assessment
- c. Health economics- both cost effectiveness and result to
plane future study including funding

F. Data collection and standard and analysis

All the data of subjective and objective parameters should be collected in a standard proforma and analyzed with standard statistical method by statistician

G. Reporting

- a. Publication in research journal
- b. Publication in print media for common people in non medical language
- c. Transparency in experimental and clinical trial by reporting to CTRI

III. OBSERVATION

Different types of chronic wounds described in Sushruta Samhita are identical with different types of chronic wound modern era of surgical practice like diabetic wound , pressure wound , arterial wound, venous wound, infected wound etc. Different mode of injury , clinical presentation , principles of management of Dustavrana are similar with different types of chronic management. Different material use for debridement, local application, bandaging etc. described in Ayurveda need revalidation with standard protocol of modern scientific research tool. Study design and outcome of research should be uniform in all different system of medicines and

should always be revalidated with invitro and in vivo study by scientific community.

IV. RESULTS

Different standard research protocol described in Sushruta Samhita for Dustavrana are identical with the research protocol for Chronic wound management in present era.

V. CONCLUSION

Method of different types of wound debridement, wound bed preparation and other modalities of management described in Shastiupakrama in Ayurveda need revalidation through standard protocol. Both experimental and clinical study with standard research protocol can give new non corrosive solution for wound debridement and local wound care product for chronic wound management

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