

Efficacy of Thumari Malahara in The Management of Dushta Vrana (Chronic Non-Healing wound): A Single Case Report

Manisha Kapadiya¹, T.S. Dudhamal²

Author Affiliation: ¹PG Scholar 3rd Year
²Associate Professor and I/C HOD, Dept. of Shalyatantra, IPGT & RA, Gujarat Ayurved University, Jamnagar, Gujarat 361008, India.

Corresponding Author: Tukaram S. Dudhamal, Associate Professor, I/C HOD, Department of Shalyatantra, I.P.G.T. & R.A., Gujarat Ayurved University, Jamnagar, Gujarat 361008, India.

E-mail: dudhamal@ayurveduniversity.com

Abstract

Introduction: Katupila a native plant of Sri Lanka commonly known as Thumari in Saurashtra Region of Gujarat is being used in treating chronic non-healing ulcers. The aim of this study is to evaluate effect of katupila malahara in the treatment of Dushtavrana (chronic non-healing ulcer). **Materials & Method:** A 62 years old male Patient consulted OPD with complaints of chronic non-healing ulcer at lateral malleolus of left foot having slough, foul odour, pus discharge, tenderness. The size of ulcer was (5× 9×4.5) cm sized. Patient had treating of two times skin grafting, but skin graft was failed. **Result:** Non-healing chronic ulcer completely healed within 4 weeks of treatment. The positive finding in this case is that even in old age ulcer healed and without skin grafting with good tissue strength. **Conclusion:** Study concluded that *Thumari malahar* had healing potential in chronic non-healing ulcer.

Keywords: *Dushta Vrana, Katupila, Malahara, Non-Healing Wound, Securinega Leucopyrus, Thumari.*

How to cite this article:

Manisha Kapadiya & T.S. Dudhamal. Efficacy of Thumari Malahara in The Management of Dushta Vrana (Chronic Non-Healing wound): A Single Case Report. Indian J Ancien Med Yog. 2019;12(1):21-25.

Introduction

A chronic wound which is not heal in an orderly set of stages and in a predictable amount of time the way most wounds do; Wounds that do not heal within three months are often considered in chronic wounds. Chronic wounds seem to be detained in one or more of the phases of wound healing. For example, chronic wounds often remain in the inflammatory stage for too long [1]. To overcome that stage and jump-start the healing process a number of factors need to be addressed such as bacterial burden, necrotic tissue, and moisture balance of the whole wound [2]. In acute wounds, there is a precise balance between production and degradation of molecules such as collagen; in

chronic wounds this balance is lost and degradation plays too large a role. These wounds cause patients severe emotional and physical stress and create a significant financial burden on patients and the whole healthcare system.

Emotional stress can also negatively affect the healing of a wound, possibly by raising blood pressure and levels of cortisol, which lowers immunity [3]. Emotion stress over an old age contribute to chronic wounds. The skin of older people is more easily damaged, and older cells do not proliferate as fast and may not have an adequate response to stress in terms of gene upregulation of stress-related proteins. In older cells, stress response genes are overexpressed when the cell is not stressed, but when it is, the expression of



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0.

these proteins is not upregulated by as much as in younger cells [4].

Securinegaleucopyrus is a desert climatic plant found in wet climates in Sri Lanka known as Katupila. It is known as *Thumari* in Saurashtra region of Gujarat or *Paanduraphalika* in the Indian Sub-continent also called as "Spinous fl uggea" in English [5]. Previous case reports/ research showed wound healing potential in powder form, ointment & gel form in management of nonhealing wound [6,7,8]. This is the first attempt to report the efficacy of *Katupila Malahara* (modified form from *churna*) in chronic non-healing ulcer. In this case report the *Thumari malahar* was used for management of non-healing chronic wound.

Case report

A 62 years old male patient came at shalyatantra outdoor patient department with complaints of non-healing ulcer at left foot with pus discharge off & on manner, difficulty in walking since last 5 years. On examination (5×9×4.5) cm sized infected ulcer at lateral malleolus of left foot with slough, foul odour, pus discharge, tenderness, slopping edges, surrounding area was hyper pigmented [Fig. 5]. Muscle wasting was also present at left lower limb due to old age. Patient had a history of insect bite 5 years back after that abscess was developed that leads to ulcer which became chronic and gradually increase in size. So, that ulcer was treated by the general practitioner, but did not got any relief & surgeon advised for skin grafting. So, patient under went skin grafting for two times (1 year and 3 years back) but both time that graft was failed. Laboratory investigations for total leukocyte count, differential leukocyte count, haemoglobin was in the normal range while blood urea and serum creatinine were at borderline (Table 1) Patient was admitted in male Shalya ward for further management.

Preparation of Thumari Malahara: *Tila taila* and *Siktha* was taken in 1:5 ratio for the preparation of *Siktha Taila* [9] [Fig. 1]. After preparing of *Siktha Taila* it was poured in porcelain *Kharala* [Fig. 2]. Then, *Katupila* powder (sieved by #120) [Fig. 3] was added in *Siktha Taila*. Trituration was done continuously till *Malahara* like consistency attained [Fig. 4]. *Malahara* was stored in airtight container.

Patient was treated with local application of *Thumari malahara* daily and observed for improvement at regular intervals. The wound was cleaned with normal saline and *Thumari Malahara* was applied in adequate quantity. Changes in

symptoms like tenderness, colour, inflammation, slough, discharge, size of wound were observed daily. After 7th day, of application of *Thumari Malahara* wound was free from pus discharge, swelling and tenderness. On 15th day, there was fresh granulation tissue with contracting margins observed as a sign of wound healing. Filling of the wound base with fresh and well-vascularized tissues was formed with decreased wound size [Fig. 7]. On 21st day, wound was half of the first consultation healed. After 30 days of treatment wound was completely healed with white scars [Fig. 10].



Fig. 1: Siktha & Tila Taila



Fig. 2: Siktha Taila



Fig. 3: Thumari plant & powder



Fig. 4: Thumari malahara



Fig. 7: Healthy wound on 15th day

Observations & Results



Fig. 5: wound status on 1st day



Fig. 8: Wound status on 21st day



Fig. 6: wound status on 8th day



Fig. 9: Wound status on 25th day



Fig. 10: Healed wound on 30th day

Table 1: Laboratory investigations

Investigations	Before treatment	After treatment
Hb %	14.2 gms%	12.0 gms%
TC	6100/Cumm	4400/Cumm
DC: N/L/E/M/B	56/31/04/09/00%	50/37/08/05/00%
FBS	86 mg/dl	81 mg/dl
PPBS	106 mg/dl	108 mg/dl
B. Urea	41 mg/dl	31 mg/dl
S. Creatinine	1.6 mg/dl	1.1 mg/dl

Discussion

Acharya Sushruta describe two types of Vrana, Neeja and Aagantuja. [10] This ulcer can consider as a Neeja Vrana due to insect bite. *Katupila* has *Kashaya Rasa* which provides *Lekhana* (scraping) that helps in sloughing out necrosed tissue and preparing the wound for healing. It has *Sandhankara* properties means it helps in wound contraction, *Ropana* properties that helps in healing, and *Stambhana* properties which helped to stop discharge from the wound. *Tikta Rasa* also having *Lekhana*, *Shoshana* properties that dries up the pus, *Shodhana* which helps in purification of wound. *Thumari* leaf powder having large amount of tannin and oil that is helpful in the wound healing [11]. *Sikthaas* well as *Tila Taila* acts as drug penetration enhancer [12].

Katupila leaves possess antibacterial, [13] anti-inflammatory and immune-modulatory activities [14]. *Katupila* not only scavenges off the free radicals, but also inhibits the generation of free radicals [15]. These properties are helpful for proper disinfection of ulcer and also promote healthy granulation tissues. pH value of *Katupila* leaves is 4.5 [16] which is Acidic. Acidic pH supports wound healing process. Such as it suppresses bacterial growth, reduces proteolytic activity, enhance fibroblast growth in

vitro, leads to more oxygen supply and it leads to successful self-healing of chronic wounds [17]. So, we can reveal that acidic environment helps in wound healing by reducing toxicity of bacterial end products, controlling wound infection, increasing antimicrobial activity, altering protease activity, releasing oxygen and enhancing epithelization and angiogenesis. The *Malahara* formulation is easy to apply, very safe and tolerable to the patient without any side effect.

Conclusion

A single case study concluded that *thumari malahara* has potential in the management of chronic non-healing ulcer even in patients of the old age. This observation needs to be studied in more patients to explore better options for management of chronic non-healing ulcer.

Acknowledgement

The authors would like to thank Dr. Sarika M. Makwana, PG Scholar of RSBK Department, IPGT and RA, Jamnagar for helping to prepare *Thumari Malahara*.

Support/Funding: None

Conflicts of interest: Nil

Permissions: None

References

1. Snyder RJ, Treatment of nonhealing ulcers with allograft. *Clinics in Dermatology*. 2005;23(4):388-395.
2. Gist S, Iris TM, Falzgraf S, Cameron S, Beebe M. Wound care in the geriatric client. *Clinical Interventions in Aging*. 2009;4:269-287.
3. Augustin M, Maier K, Psychosomatic Aspects of Chronic Wounds, *Dermatology and Psychosomatics*. 2003;4:5-13.
4. Thomas AM. Understanding chronic wounds: A unifying hypothesis on their pathogenesis and implications for therapy. *The American Journal of Surgery*. 2004;187(5A):65-70
5. Santhapu H. *Humari (Securinega leucopyrus)*. *Plants of Saurashtra a Preliminary List*. Rajkot: S.J.F.N.I. Saurashtra Research Society; 1953.
6. Ajmeer AS, Dudhamal TS, Gupta SK. Management of Madhumehajanya Vrana (diabetic wound) with *Katupila (Securinega leucopyrus [Willd] Muell.)* Kalka. *AYU*. 2015;36(3):353-55.

7. Ghodela NK, Dudhamal TS, Clinical efficacy of *thumari* oil (*Securinega leucopyrus*) in the management of diabetic foot ulcer: A case report, J. Ayurveda, 2017;11:100-103.
 8. Ghodela NK, & Dudhamal TS, Management of Bed Sores with Thumari Gel [*Securinega leucopyrus* (Willd.) Muell.]-An Extra-pharmacopeal Drug- A Case Study. International Journal of AYUSH Case Reports, 2018;2(1):20-25.
 9. Shastri K, editor of Rasa tarangini Ch.1 ver. 34, 8th edition, motilala banarasi das New delhi; reprint 2014.p.17.
 10. Srikanthamurthy KR, translator of *susruta Samhita chikitsasthana*, ch.1, ver.3, vol. 2, Chaukhambha Orientalia, Varanasi; 2016.p.3.
 11. Ajmeer AS, Harisha CR, Dudhamal TS, Gupta SK, micromorphological and micrometric evaluation of *Securinega leucopyrus* (WILLD) MUELL. Leaf and stem-unexplored drug, IJSIT. 2013;2(2):140-49.
 12. Perween S. et al. Preparation of *Dadruvidravana malahara* and its standardization. international journal of research in ayurvedic medicine, 2017;3(1):1-4.
 13. Dondaa MR, Kudlea KR, Alwalaa J, Miryalaa A, Sreedharb B, Pratap Rudra MP, Synthesis of silver nanoparticles using extracts of *Securinega leucopyrus* and evaluation of its antibacterial activity. Int J Curr Sci, 2013;7:1-8. 10
 14. Gopal TK, Investigation of In-Vitro Anti-Oxidant, Anti-Inflammatory and Anti-Arthritic Activity of Aerial Parts of *Securinega leucopyrus* (Willd.) Muell, Indian Journal of Research in Pharmacy and Biotechnology. 2013;1(3):371-378.
 15. Vidyadhar S, Sheela T, Reddy LSK, Gopa TK, Chamundeeswari D, Saidulu A, Maheswarareddy CU, In vitro antioxidant activity of chloroform extract of aerial parts of *Securinega leucopyrus* (willd.) Muell-Scholars Research Library, Der Pharmacia Lettre, 2010;2(6):252-256.
 16. Ghodela NK, Vijay K, Dudhamal TS, Naria MK, A wonderful medicinal plant: *securinega leucopyrus* (willd) muell- a brief review, IJSIT. 2016;5(6):472-84.
 17. Schneider LR et al. influence of pH on wound-healing: a new perspective for wound-therapy? Arch Dermatol Res. 2007;298:413-20.
-