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Author: G. Sritharan, Anpuchelvy.S, S. Ganesan

University of Jaffna, Herbal Health Care Centre;

Siddha Dispensary Jaffna Municipal Council, Sri Lanka

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STUDY ON THE EFFECTS OF A SIDDHA SURGICAL METHOD IN THE MANAGEMENT OF CHRONIC WOUNDS – CASE STUDY

¹Anpuchelvy.S ²G. Sritharan, ³S. Ganesan

¹Unit of Siddha medicine, University of Jaffna, ²Herbal Health Care Centre,

³Siddha Dispensary, Jaffna Municipal Council,

Sri Lanka

ABSTRACT

Diabetic ulcers are major health issue worldwide, causing significant economic burdens and affecting both the patient and the society as a whole. Predisposing factors in diabetic patients known as the pathogenic triad, comprise trauma, ischemia, and neuropathy. Regardless of the cause, correct diagnosis and prompt treatment are essential in the management of leg ulcers. Case history

We report a case of 45-years old male patient, with a known history of type 2 diabetes mellitus who presented to our hospital with of non healing wounds over the left sole of the foot with a gangrenous over a period for two months. When he came to our clinic he was already advised to left foot amputation to avoid further complications. After careful examination of wound it was found that the wound was irregular in shape with unhealthy granulation tissue. On further inspection the surrounding areas of wound shows inflammatory changes with unpleasant foul smelling watery discharges. So, our main aim was to treat the impending diabetic condition and prevent the foot from amputation which came as a major challenge. To remove harmful microorganism, wound was cleaned with Triripala decoction (Herbal antiseptic lotion). Then Probe was introduced in the fistula region. In the technique, a specially prepared medicated thread known as “Kshara sutra” (Medicated alkaline thread) is used. This sterilized thread is

repeatedly soaked in solution of Herbal Medicine (Figures I and II). Another wound also covered by the Kshara gauze. Bandaging was done moderately while external herbal applications were applied to the wound area. A multidisciplinary holistic approach must be used when treating diabetic foot ulcers. Different modalities and sessions of debridement should be performed after optimizing the general condition of the patient.

Key words: Tripala decoction, Kshara sutra, Herbal Medicine

INTRODUCTION

Wound healing is a complex process. It depends on multiple factors that play a major role in healing. The concentration of biochemical transmitters and the cellular composition of wound surfaces are the most important factors. A defect in one of these factors can lead to the development of skin ulcers. i.e, wounds that do not heal by the usual process. Undoubtedly, skin ulcers are caused by the alteration of physiological and functional integrates of the wounds. Regarding the types of ulcers, chronic ulcers are defined as wound with more than 406 weeks of healing time (Sign. 1998). One of the main contributing factors to wound healing is risk factors, such as diabetes (Mandewo, et.al.2014). In addition, the most feared complication of diabetes mellitus is a diabetic ulcer

(Subhash, 2005). Therefore, diabetic patients should maintain well-control blood glucose achieved by strictly adhering to medication therapy, exercise and diet to decrease long-term complications, including ulcers, managing deep soft tissue wounds in diabetic patients who suffer from severe osteomyelitis can be difficult because of the complexity and management of subsequent soft tissue defects (Armstrong, 2004). In such cases, multidisciplinary and advanced wound care techniques, including negative pressure wound therapy and an ideal wound healing dressing are usually needed to enhance wound healing and increase the formation of granulation tissue (Armstrong, 2005).

World Health Organization (WHO) as well our country has been promoting traditional medicine because they are less expensive, easily available and comprehensive, especially in developing countries [Armstrong, 2004]. Traditional forms of medicine practiced for centuries in Africa and Asia are being scientifically investigated for their potential in the treatment of wounds related disorders. According to, 70% of the wound healing Siddha & Ayurvedic drugs are of plant origin. Topical antimicrobial therapy is one of the most important methods of wound care [Lavery, 2006]. Some medicinal plants have been employed in folk medicine for wound care [Bowler, 2001]. Some of these plants either possess pro-wounding healing activities or exhibit antimicrobial and other related properties which are beneficial in overall wound care [Armstrong 2005]. Therefore, researchers are progressively turning their attention to natural products, looking for new leads to develop better drugs against microbial infections and screening of several medicinal plants for their potential antimicrobial activities [Apelqvist, 2008]. The purpose of this study was to investigate the comparative clinical efficacy of the Siddha Surgical method, in

the treatment of wound caused by some bacteria. This may lead to the intervention of an alternative form of treatment other than antibiotics being used at present.

Objective

To evaluate the efficacy of a Siddha & Ayurveda Surgical method in the management of chronic wounds.

Case Report

A male patient aged 45 years visited in Herbal Health Care Centre, Jaffna, SriLanka, he had complaints of non-healing wounds over the left foot (more plantar aspect) with a gangrenous sole over a period two months. On enquiry, patient was found to be a case of controlled diabetes for three years, however which become uncontrolled since last six to eight months. He was on anti-diabetic treatment on hypoglycemic from a renowned diabetologist from nearby allopathic hospital and his blood glucose levels were within normal limits. But from last two months he developed non-healing wounds over left foot. He took treatment for the same from modern medicine surgeons but due to uncontrolled blood sugar level was diagnosed recently the prognosis was poor. When he came to our clinic, he was already advised for left foot amputation as prevention to avoid further complications. After careful examination of wound it was found that the wound was irregular in shape with unhealthy granulation tissue. On further inspection the surrounding areas of wound shows inflammatory changes with unpleasant foul-smelling watery discharges. So, our main aim was to treat the impending diabetic condition and prevent the foot amputation which came as a major challenge.

METHODOLOGY

The following investigation were done, fasting blood sugar level 186 mg/dl, post

prandial blood sugar level 252mg/ dl, HbA1C 8.4, BP 140/80mmHg.

Operative procedure

Wound management

At first clean the wound with Tripala decoction (Herbal antiseptic lotion) to prevent the growth of harmful microorganisms and a wound fistula was identified. A Probe was introduced in the fistula region. In the technique, a specially prepared medicated thread knows as “Kshara sutra” (Medicated alkaline thread) is used. This sterilized thread is repeatedly soaked in solution of Herbal Medicine (Figures I and II). Another wound also covered by the “Kshara paste” gauze. Bandaging was done moderately while external herbal applications were applied to the wound area

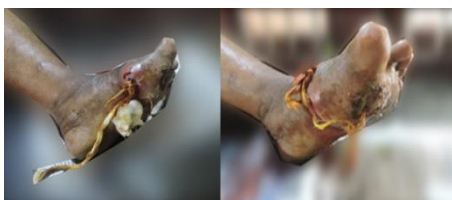


Fig-I&II: Wound Probing of the Fistula of the wound post-operative management

Following above treatment for every other day up to 60 days.

1. Details of Oral drugs and Para surgical procedure: Initially oral medication was given 7 days to patient for Pachana. Pancha theppaknichurnam 3g with Hot water morning & evening. Kaishoor Guggulu 2 tablets (500 mg each tablet) tds, Arogyavardhani Vati 2 tablet (250mg each tablet) tds, Thripala Churnam 4 g bd and green oil for local application.

2. In second visit the previous medication was continued with Wound Healing Churnam 3g, Sutharsana, Tab 2

bd. Amritarishta 20 ml bd with equal amount of water and Kadukai chunam 3g with hot water [5] at bed time in day. All this medication was continued for two months.

3. Kshar sutra (Medicated thread) and Kshar gauze dressing of wound was every other day.



Fig-III: In the Treatment of the Fistula of the wound



Fig-IV&V: After the Treatment of the Fistula of the wound

RESULT & DISCUSSION

Peripheral diabetic neuropathy is responsible for about 80% of amputations after a foot injury or a laceration (American Diabetes Association, 2020). Regardless of the cause, a correct diagnosis and prompt treatment are essential in the management of leg ulcers. Therefore, the management of diabetic foot and ulcer should involve a mix of

strategies, including patient care and education. Moreover, adherence to physician recommendations and routine inspections of foot, skin and toenails is strongly encouraged. In addition, tight glycemic control by oral hypoglycemic drugs or insulin is needed (Guarnera,et.al. 2007). One of the most important parts of diabetes management is the holistic, and multidisciplinary nature of diabetes care, which provides diabetes support, and education, in addition to care. When it comes to dealing with chronic leg ulcers, patients consult different specialists, including endocrinologist for proper glycemic control, diabetic foot surgeon and plastic surgeon for wound coverage, vascular surgeon for vascular complications and lastly, infectious disease specialist for optimum antibiotic treatment. Chronic leg ulcers are common complication of diabetes, usually associated with a significant impact on the quality of life. The chronic leg ulcers can be a burden to the health care system (Callam,et.al, 1985) similarly, they also can be associated with devascularization, infections, neuropathies, and prolonged decubitus. Like in our case, several factors can contribute to the etiology of chronic leg ulcers and can significantly delay wound healing. (Kumar,et.al.2008).

Acharya Sushruta described 60 treatment modalities to treat different type of Vrana. Kshar sutra remains in direct contact of the tract & root, therefore acts directly on the diseased area. Kshar sutra dissolves the tough fibrous tissue & chemically corrects all the infection. Out of the tract & therapy allowing the fistulous tract to collapse and heal. Kshar sutra keeps the whole tract open & facilitates the drainage of the all the infection out of the body in the form of pus and thus prevents the further spread of fistula within the body. Kshar sutra due to its Antibacterial property does not allow the bacteria to multiply. After the Kshar sutra & internal medicine therapy the

result were found to be miraculous and gave the patient a new ray of hope. Within sixty days granulation tissue was formed (Figures II). Daily wound was washed with Triphala decoction. The ointments prepared from Triphala extracts show significant wound closure in vivo. The granulation tissue shows reduced bacterial count, increase in collagen, hexosamine and uronic acid. Tripala when used to close wounds showed increased thermal stability, water uptake capability, faster wound closure, improved tissue regeneration etc. Epigallocatechin gallate interaction with collagen contributes to this quick wound healing activity. Triphala has also shown in vitro wound healing activity [Kumar,et.al.2008]. In one study, an infected wound was dressed with triphala (methanol extract). The study revealed that matrix metalloproteinases expression was correlated well with reduction in the inflammatory phase, thus confirming the efficacy of the dressing [Kumar,et.al.2010]. Another study had shown in vitro activity of triphala against wound pathogens such as *Staphylococcus aureus*, *Pseudomonas aeruginosa* and *Streptococcus pyogenes*. Reduction of matrix MMP expression was observed in the treated group by gelatin zymography [Kumar,et.al.2008]. Dhupana of the wound with Nimba, Jatamansi, Musta, Triphala, Guggula, Manjishtha and a drop of Gandhaka Druti, pachai ennai on a surgical pad and dressing of wound. This was done twice a day and massage the leg. Internal treatment was given for a period of 45 days.

This case would have likely led to leg amputation; however, due to the collaborative effort of the management team who used different modalities of care and wound management, amputation could be avoided after treatment of the patient.

CONCLUSION

Some conditions of wound are really difficult to treat, when after advanced management protocol available in bioscience. But by using Siddha & Ayurvedic concept of wound management we achieve mark improvement in this type of Chronic wound condition. There is a lot of scope for further research in this field for betterment of patient & there hope for wellbeing.

Author declaration

All authors were involved in the management of the patient. All the authors have read and approved the manuscript.

Data availability:

All necessary data and references are provided

Conflict interest: Authors declare no conflict interest.

REFERENCES

- Armstrong, and B. A. Lipsky, "Diabetic foot infections: stepwise medical and surgical management," *International Wound Journal*, vol. 1, no. 2, pp. 123–132, 2004.
- Armstrong .D. G. and B. A. Lipsky, "Advances in the treatment of diabetic foot & Therapeutics, vol. 6,2,pp.167-177,2004.
- Armstrong,D. G and L. A. Lavery, "Negative pressure wound therapy after partial diabetic foot amputation: a multicentre, randomized controlled trial," *The Lancet*, vol. 366, no. 9498, pp. 1704–1710, 2005.
- Armstrong,D. G. C. E. Attinger, A. J. M. Boulton et al., "Guidelines regarding negative wound therapy (NPWT) in the diabetic foot," *Ostomy/Wound Management*, vol. 50, 4B Suppl, pp. 3S–27S, 2004.
- Apelqvist,J. D. G. Armstrong, L. A. Lavery, and A. J. M. Boulton, "Resource utilization and economic costs of care based on a randomized trial of vacuum-assisted closure therapy in the wounds," *treatment of diabetic foot The American Journal of Surgery*, vol. 195, no. 6, pp. 782–788, 2008.
- Atlanta,G. A. CDC report finds large decline in lower-limb amputations among U.S. adults with diagnosed diabetes, *Centers for Disease Control and Prevention*, 2012.
- Bowler,P. G. B. I. Duerden, and D. G. Armstrong, "Wound microbiology and associated approaches to wound management," *Clinical Microbiology Reviews*, vol. 14, no. 2, pp. 244–269, 2001.
- Callam,M. J C. V. Ruckley, D. R. Harper, and J. J. Dale, "Chronic ulceration of the leg: extent of the problem and provision of care," *British Medical Journal (Clinical Research Ed.)*, vol. 290, no. 6485, pp. 1855-1856, 1985.
- Faglia,E. G. Clerici, M. Caminiti, A. Quarantiello, M. Gino, and A. Morabito, "The role of early surgical debridement and revascularization in patients with diabetes and deep foot space abscess: retrospective review of 106 patients with diabetes," *The Journal of Foot and Ankle Surgery*, vol. 45, no. 4, pp. 220–226, 2006.
- Guarnera.G. G. Tinelli, D. Abeni, C. Di Pietro, F. Sampogna, and S. Tabolli, "Pain and quality of life in patients with vascular leg ulcers: an Italian multicenter study," *Journal of Wound Care*, vol. 16, no. 8, pp. 347–351, 2007.
- Kumar MS, Kirubanandan S, Sripriya R, Sehgal PK. Triphala promotes healing of infected full-thickness dermal wound. *J Surg Res*. 2008; 144(1):94-101.
- Kumar MS, Kirubanandan S, Sripriya R, Sehgal PK. Triphala Incorporated Collagen Sponge-A Smart Biomaterial for Infected Dermal Wound Healing. *J Surg Res*. 2010; 158(1):162-170.
- W. Mandewo, E. Edodge, A. Chideme-Munodawafa, and G. Mandewo, "Non-adherence to treatment among diabetic patients attending outpatient clinic at Mutare provincial hospital, Manicaland province, Zimbabwe," *International*

- Journal of Scientific & Technology Research*, vol. 3, pp. 66–86,
- 2014 Palfreyman, S. “Assessing the impact of venous ulceration on quality of life,” *Nursing Times*, vol. 104, no. 41, pp. 34–37, 2008.
- Posnett, J. and P. J. Franks, “The burden of chronic wounds in the UK,” *Nursing Times*, vol. 104, no. 3, pp. 44-45, 2008.
- Reyzelman, A. M. D. G. Armstrong, D. J. Vayser, S. A. Hadi, L. B. Harkless, and S. K. Hussain, “Emergence of non-group a streptococcal necrotizing diabetic foot infections,” *Journal of the American Podiatric Medical Association*, vol. 88, no. 6, pp. 305–307, 1998.
- Subhash, C. “Diabetic foot ulcer—a case study,” *Journal of Exercise Science and Physiotherapy*, vol. 1, pp. 98-99, 2005
- The Care of Patients with Chronic Leg Ulcers. Guideline 26, Sign, Edinburgh, 1998.* Lavery, L. A. D. G. Armstrong, R. P. Wunderlich, M. J. Mohler, C. S. Wendel, and B. A. Lipsky, “Risk factors for foot infections in individuals with diabetes,” *Diabetes Care*, vol. 29, no. 6, pp. 1288–1293, 2006.