

A CASE STUDY ON SIDDHA MANAGEMENT OF CHRONIC NON-HEALING DIABETIC FOOT ULCER**Sangeetha M. K.^{1*}, Rajakumar K.², Nithyamala I.³ and Panneerselvam N. R.⁴**^{1,2,3}Siddha Physician, Dr. Rajkumars Siddha Clinic, Chennai.⁴Professor, Department of Kuzhanthai Maruthuvam, Sri Sairam Siddha Medical College and Research Center, Chennai.**ABSTRACT**Article Received on
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A 55-year married male from Chennai presented with ulcer in the plantar aspect of right foot with foul smelling pus discharge from the ulcer and swelling in the peri-wound area for one month. He was diagnosed to be affected by Diabetic Foot Ulcer which is equated to *Mathumega Viranam* in Siddha system of medicine. He was treated with Rasagandhi mezhugu, Parangipattai mathirai, Seenthil Sarkarai, Palagarai parpam mathirai, Diazen tablet, Padigara neer and Mathan Thylam. The duration of treatment was 65 days. There were no adverse reactions/events observed during the course of treatment. The combination therapy has provided the reduction in pain, pus discharge,

peri wound area which were measured using Diabetic Ulcer Severity Score.

KEYWORDS: Diabetic Foot Ulcer, Mathumega viranam, Siddha.**INTRODUCTION**

Diabetic foot ulcer is one of the serious complications of Diabetic Mellitus leads to long stretches of hospitalization and it may result in amputation of limb. It is characterised by neuropathy, ischaemia and infection.^[1] In addition, such foot ulcers significantly affect the quality of life (QoL) of patients such as loss of mobility affecting ability of patients to do simple, day to day activities.^[2] It is estimated that 15% of diabetic individuals to be affected by Diabetic foot ulcer during their lifetime and 15 – 20% of patients with diabetic foot ulcers may need an amputation. Diabetic foot ulcers lead to almost 85% of amputations.^[3-5] With increase in age and the duration of diabetes the risk of foot ulceration and limb amputation also increases.^[6-8] It is evident that foot ulcers in latter stages are associated with serious

morbidity and overall reduction in quality of life. The complicating factor of underlying peripheral vascular disease renders majority of diabetic foot ulcers asymptomatic during the early stages of disease. In the latter more advanced stages, evidence of tissue loss becomes more evident, frequently occurring in the form of chronic non-healing foot ulcers.^[9-10]

Siddha system is the traditional system of medicine widely practised in the southern part of India particularly in Tamilnadu. A diabetic ulcer is correlated to 'Madumega viranam' in Siddha system of medicine. According to the Siddha literature, wounds are classified into 16 types; these types are comprised in the 3 major divisions that are Vali Viranam, Azhal Viranam and Iya Viranam. Vali and Azhal category of the wound is treated with oil-based (Thailam) medicines and Iya category of wounds are treated with oil (Thailam) or powder-based (Chooranam/Parpam) medicines.^[11] These forms are utilized in enabling a wound to attain healthy and healing stage from infective state. Wounds /ulcers of the diabetic patient are cured with difficulty. Even with the latest technology and modern medicine in hand, highly trained medical team around, yet the majority of the diabetic ulcers end up with more or less amputation of the concerned major or minor part of the lower limb.^[12] But through the Siddha system of medicine, wound care treatment in unique and variety of internal and external therapies available to cure. In this study, the case was treated with selected Siddha internal and external medicines commonly used to treat diabetes and wounds to evaluate the efficacy of Siddha medicines in the treatment of Diabetic ulcer.

Patient information

A male patient aged 55 years visited Dr. Rajkumar's siddha clinic, Chennai-47 with complaints of ulcer in the plantar aspect of right foot with foul smelling pus discharge from the ulcer and swelling in the peri-wound area for one month. Patient experienced a traumatic wound when he walked in bare foot. He was known Diabetic for the past 10 years under allopathic treatment and has no history of Systemic hypertension, Dyslipidaemia, Bronchial asthma and Jaundice.

Diagnostic assessment

Severity of Diabetic Ulcer was assessed by Diabetic Ulcer Severity Score (DUSS).^[13] The score has four variables i.e. palpable pedal pulses, probing to bone, Ulcer site and Ulcer number. DUSS score was found to be 2. This score obtained at baseline was compared with the final score. Besides, Fasting and Post-prandial blood sugar was found to be 170 mg/dl and 310 mg/dl. HbA1C of the patient was 7.5.

Interventions

The patient was treated internally with Capsule Rasagandhi mezhugu (SKM Siddha & Ayurveda company), Parangipattai mathirai (SKM Siddha & Ayurveda company), Seenthil Sarkarai (Impcops), Palagarai parpam mathirai (SKM Siddha & Ayurveda company), Diazen tablet (Apex laboratories Pvt Ltd.). Padigara neer (Impcops) and Mathan Thylam (SKM Siddha & Ayurveda company), were given as external medicines.

Table 1: Interventions.

S.No	Name of the drug	Dosage	Mode of usage	Time of usage
1.	Capsule Rasaganthi Mezhugu	1 No.	Internal	Twice a day, after food
2.	Parangipattai Mathirai	2 Nos	Internal	Twice a day, after food
3.	Seenthil Sarkarai	2 g	Internal	Twice a day, after food
4.	Palagarai parpam mathirai	2 Nos	Internal	Twice a day, after food
5.	Tablet Diazen	2 Nos	Internal	Twice a day, Before food
6.	Padigara neer	Quantity sufficient	External wash	Twice a day
7.	Mathan thylam	Quantity sufficient	External dressing	Twice a day

RESULTS AND DISCUSSION

Fifty five years old male patient from Tamilnadu was visited in the clinic for the complaints of chronic non-healing ulcer in the plantar aspect of right foot with foul odour and pus discharge from the ulcer. Siddha therapeutic procedures were helped to improve the Quality of Life of the patient. During treatment patient was given with both internal as well as external medicines namely Capsule Rasagandhi mezhugu, Parangipattai mathirai, Seenthil Sarkarai, Palagarai parpam mathirai, Diazen tablet as internally and Padigara neer and Mathan Thylam wash as externally and was advised to follow regularly. Outcome was measured based of DUSS (Diabetic Ulcer Severity Score). During the course of the treatment the patient feels good and comfort on doing his daily routine as well as his quality of life and self-esteem was improved. Patient was really satisfied with the treatment and he was willing to follow the treatment.

Mathan thylam is widely used in Siddha medicine because of its wound healing properties, skin generation, angiogenesis and bacterial inhibition. Diazen tablet and Seenthil sarkarai have the property of decreasing blood glucose level and Padigara Neer, used as external wash

has the function of wound healing and anti-microbial. Results were tabulated and it shows a significant reduction in blood sugar level, as well as rise in level of neutrophils and lymphocytes. The study has satisfactory improvement in the non-healing chronic diabetic ulcers based on the assessment tools of DUSS which compared before and after treatment. No adverse event was observed during the course of the treatment.



Fig. 1: Prognosis of Diabetic Ulcer.

Table 2: Diabetic Ulcer Severity Score.

VARIABLES	SCORE 0	SCORE 1
Palpable pedal pulses	Presence	Absence
Probing to bone	No	Yes
Ulcer site	Toes	Foot
Ulcer number	Single	Multiple

Before treatment DUSS score was 2 and after treatment it was reduced to 0.

Table No. 3: Comparative Haematological Parameters.

Haematological parameters	Before treatment	After treatment
Total WBC count(cells/cu. mm)	8140	8210
Neutrophils (%)	72.9	75.6
Lymphocytes (%)	18.0	21.0
Basophils (%)	0.5	0
Eosinophils (%)	2.3	3.4
Monocytes (%)	6.3	0
Hemoglobin (g/dl)	11.8	12.1
ESR(Mm/Hr)	100	40

Table 4: Timeline of clinical findings.

Days	Observations	Treatment / Investigations
Day 1 07.11.2020	Ulcer was with present with foul odour, discharge along with necrotized cellular debris.	Both internal and external medicines were given. Blood samples were collected for investigations.
Day 15 21.11.2020	Necrotized tissues started disappearing.	Both Internal and external medicines were given.
Day 30 06.12.2020	Pus discharge was reduced. The colour of edges of the ulcer started to change and necrotized tissues was disappeared	Both Internal and external medicines were given.
Day 45 21.12.2020	Foul odour, pus discharge in the wound was completely stopped. Swelling in the Peri- wound area was reduced. wound circumference was reduced.	Both Internal and external medicines were given.
Day 65 10.01.2021	Depth of the wound was almost closed patients relieved from all of his symptoms.	Both Internal and external medicines were given. Blood samples were collected for investigations.

Table 5: Comparative Biochemical Parameters.

Biochemical Parameters	Before Treatment	After Treatment
Fasting blood sugar (mg/dl)	170	120
Post prandial blood sugar (mg/dl)	310	180
HbA1C	7.5	7.2
Serum Cholesterol (mg/dl)	186	178
HDL (mg/dl)	27	31
LDL (mg/dl)	49	58
Blood Urea (mg/dl)	32	32
Serum Creatinine (mg/dl)	1.0	1.0
Triglycerides (mg/dl)	110	90

CONCLUSION

A debilitating complication of diabetes mellitus is diabetic ulcers, which leads to increased overall morbidity in patients. The present study showed that Diabetic ulcer was healed and the Diabetic Ulcer Severity Score was reduced from 2 to 0 after treatment. Besides, fasting blood glucose, HbA1C were also reduced and there was increase in neutrophils and

lymphocytes. Further studies need to be conducted to evaluate the efficacy of these Siddha medicines.

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