

Efficacy of Homoeopathic Medication in the Treatment of Diabetic Foot Ulcer - A Case Study

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Abstract: *One of the serious complications of diabetes mellitus is Diabetes Foot Ulcer [DFU], not only because of its mortality but due to its morbidity which is difficult to manage. Being a common cause for Hospitalization of Diabetic patients and a major cause of amputations, the treatment of these cases are often exhausting to the patients. Beginning as a simple trauma, the progression of the ulcer is rapid and the associated vascular and neuropathic affections hinders its cure further adding to its bad prognosis. Common treatments involve debridement of the dead tissue, foot care, antibiotics, amputation etc., however even after prolonged treatment the healing is not complete and it has a high rate of recurrence. Along with its effectiveness in treating such cases, Homoeopathy does not add to the patient's psychological trauma by negating the need for Amputation. In this case, a 73 year old male presented with ulcer on right great toe of 3 weeks duration. There was oedema and pain in foot which was radiating upwards, the surrounding skin had blackish discolouration, marked offensiveness but no any discharges. He is a known diabetic patient of 3 years duration. He was prescribed with Arsenicum Album 0/3 initially and later had been admitted in the IPD for further treatment. It was identified that he had arterial occlusion of both limbs [worse in right side] and osteomyelitis of proximal interphalange. Based on the presentations individualised remedies were followed up along with regular cleaning and dressing. Over the course of three months he had gradual improvement and he had recovered completely.*

Keywords: Cleaning and Dressing, Diabetic Foot Ulcer, Diabetes Mellitus, Homoeopathic Treatment

1. Introduction

Diabetes Mellitus a metabolic disorder of multidisciplinary etiology, has become a major health crisis due to the diverse nature of its complications. More than 14% of adults aged over 18 years and 59% of adults over 30 years are found to be living with Diabetes Mellitus as of 2022 surveys^[1]. It has been observed that Diabetes tends to increase the risk of Diabetes Foot Ulcer by 11%^[2]. One of the major complication of Diabetes Mellitus is Diabetic Foot Ulceration, which often starts with a mild trauma to the foot. This rapidly progresses into ulceration because of the added vascular and neuropathic complications which tends to make these ulcers difficult to heal and vulnerable for superadded infections which further worsens the prognosis^{[3][4]}. DFU being a sign of uncontrolled Diabetes Mellitus, is also a major contributor for hospitalization and amputation in diabetic patients.^{[2][5]}

The common sites of DFU are the pressure bearing regions such as the plantar aspect of heels tips of toes, head of metatarsals, etc.^[1] In India, there is an incidence of 85% of cases developing Diabetic Foot Ulceration and among this 75% of cases needing amputation are due to secondary infections which are often preventable.^[4] Wagner gradation classifies these diabetic ulceration as 0-5 grades based on the appearance as; Grade 0 - No open ulcers but there are preulcerative lesions or deformities, Grade 1 - Superficial ulceration involving full thickness lesions, Grade 2 - deep ulcers involving ligaments and tissues, Grade 3 - Deep ulcers with cellulitis and abscess formation, Grade 4 - Gangrene limited to portions of foot and Grade 5 - Diabetic gangrene

requiring foot amputations. This grading is used to assess the ulcers prognosis and decide the treatment modality.^{[2][4][6][7]}

In a study, the median time taken for the healing of Diabetic Foot ulceration was Six months with frequent recurrent rates.^[8] The treatment of DFU is usually targeted at maintaining the sugar levels, cleaning and dressing the wounds regularly, preventing the rise of secondary infections, when needed debridement of dead tissues, and in worse case scenarios amputations.^{[4][9]} However the recurrence rate of these ulcers after treatment are also high which often leads to physical and psychological exhaustion of patients and the added disability also makes their life challenging.^[8]

The scope of Homoeopathy in the treatment of DFU is vast and with careful treatment the quality of life of these patients are not affected. However, it is crucial to remember that a multidisciplinary approach is necessary for a good prognosis. According to the principles laid down by Master Hahnemann in his Organon of Medicine and Lesser Writings, the treatment should not be restricted to internal medication alone but should also implement external applications and surgical assistance when required. The use of individualised Homoeopathic remedies based on the presentation of the complaint along with regular cleaning and dressing of wounds is necessary to hasten cure.^{[3][10]}

2. Materials and Methods

Case Report

On 27/06/2024, presented with a complaint of ulcer on right great toe in the past 3 weeks. Pain over the foot extends

upwards to thigh with oedema on tight foot. He took allopathic medication, got no any relief. He also known case of diabetes mellitus in the past 3 years under home remedies.

Ulcer with irregular margin and unhealthy granulation tissue, with marked offensiveness but there was no any discharges.

Past History

Known complaint of diabetes mellitus since 3 years he took home remedies

Trauma over eyes -40 years ago surgically corrected.

Clinical Findings:

Physical Examination

The patient looks normal, with no pallor, no icteric, no cyanosis, no clubbing, no findings of koilonychia/ leukonychia, no lymphadenopathy or thyromegaly, Oedema: no, Skin: dryness of skin with blackish discolouration, Pulse: 70/min, Blood pressure: 128/80 mm of Hg, Respiratory rate: 18/min, Temperature: 98°F

Local Examination

Ulcer with irregular margins, measuring 2x3 cms with marked offensiveness.

Margins were everted and base was raw with unhealthy granulation tissue.

Surrounding skin was warm and had blackish discoloration present.

On dressing [16/7/24] maggots were visible [was referred for surgical removal of maggots]

Investigations:

On 17.7.2024

FBS: 118 mg/dl

HbA1C: 7.3 %

On 23.7.2024

RBS: 218 mg/dl

On 16.8.2024

FBS: 104 mg/dl

On 22/06/2024 MRI-PERIPHERAL LOWER LIMB NON-CONTRAST ANGIOGRAM:

- Mild to moderate atherosclerotic wall thickening in distal ductal aorta common iliac and common femoral artery
- Bilateral SFA popliteal artery shows complete luminal opacification
- Right leg- significant femoral mild atherosclerotic wall thickening, stenosis of 60-70% in distal dorsalis pedis plantar arch and digital arteries
- Left leg- multi focal stenosis 30-50% in middle and distal 1/3rd segment of posterior tibial artery and 50% in distal, posterior tibial artery.

On 27/06/2024- ARTERIAL DOPPLER OF RIGHT LOWER LIMB

- Intimal wall thickening in right lower limb arteries, more prominent in post tibial and dorsalis pedis arteries
- Reduced blood flow and monophasic pattern in right PTA and DPA
- Collaterals seen around ankle

On 16/7/24- X-RAY RIGHT FOOT

- Osteo-myelitic changes in interphalangeal joint of big toe.

Final Diagnosis

- Diabetic Foot Ulcer

Totality of Symptoms:

- Ulcer on right great toe; K/C/O Diabetes mellitus
- Pain and oedema over right foot
- Dryness of both hands with blackish discolouration
- Ascending pain (neuralgic) in right foot extends upwards to thigh

3. Results and Discussion

Prescription

Rx

ARSENICUM ALBUM 0/6/ 1D in 10ml aqua * 10gtt* 2hrly

Potency Selection:

As per the disease pathology and patients' susceptibility LM potency was given.

Progress:

S. No	DATE	SYMPTOMS	REMEDY	INFERENCE
1.	15.07.2024	Ulcer on right great toe. Pain and oedema over right foot. Ascending pain (neuralgic) in right foot extends upwards to thigh. Offensive odour from the ulcer.	Rx ARSENICUM ALBUM 0/6/ 1D in 10ml aqua * 10gtt* 2hrly	Based on the persisting offensiveness, sensation of warmth and unhealthy appearance of ulcer base.
2.	16/7/24 -17/7/24	Ulcer on right great toe. Pain and oedema over right foot. Ascending pain (neuralgic) in right foot extends upwards to thigh. Offensive odour from the ulcer.	Rx LACHESIS MUTUS 0/1/1D in 10ml aqua * TDS	Based on the blackish discolouration along with the x-ray finding of osteomyelitic changes. Due to rapid degenerative changes of ulcer.
3.	17/7/24 – 05/8/24	Ulcer on right great toe. Pain and oedema over right foot. Ascending pain (neuralgic) in right foot extends upwards to thigh. Offensive odour from the ulcer.	Rx MERCURIUS SOLUBILIS 0/1/1D in 10ml aqua * 10gtt* 2hrly	Based on the caries of the tarsal and meta-tarsal bones, painful ulceration.

4.	06/8/24 – 22/10/24	Ulcer on right great toe. Pain and oedema over right foot. Ascending pain (neuralgic) in right foot extends upwards to thigh	Rx MERCURIUS SOLUBLIS 0/3/1D in 10ml aqua * 10gtt* 2hrly MERCURIUS SOLUBLIS 0/3/1D in 10ml aqua * 10gtt* 2hrly	Following the gradual healing of the wound, there was a standstill state because of which the potency was increased.
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Prognosis Assessment Images:



4. Discussion

Initially, Arsenicum album was prescribed based on the presence of warmth, offensiveness and unhealthy granulation tissue. After three weeks of giving Arsenicum Album in 0/3 potency and later in 0/6 potency he did not have much improvement. Although, the ulcer appeared to be confined and did not show signs of gangrene formation there was an increase in pain, offensiveness and edema of leg with blackish discoloration; an X-ray was taken to confirm if any underlying structures were involved, the result of which confirmed that he had osteomyelitic changes of head at first interphalangeal joint and head of the proximal phalanx. Based on which Lachesis Mutus was prescribed, other than the appearance it was selected for its action on chronic ulcers of syphilitic miasmatic nature, which has ceased discharges and has impending gangrene. During the regular CND, maggots were identified in the ulcer on 16.7.24, after which he was referred for surgical intervention in order to remove the maggots and partial removal of degraded bone. The toe was not completely amputated instead the dead tissues alone were excised and the remaining toe was left in order to prevent disability. The uncontrolled Diabetes level was maintained with insulin injection along with homoeopathic medications. After surgical intervention, the medicine was changed to Mercurius Solubilis, based on its indication for caries of tarsal and metatarsal bones along with other presentation and syphilitic miasmatic traits.^[11]

During the treatment, his wound was regularly maintained by performing CND daily. First the area was washed with a saline solution prepared by adding Calendula Q, Echinacea Q and Iodum Q, after cleaning the ulcer it was dressed with Calendula Q + Echinacea Q + Iodum Q [5*+5*+2* drops] + Glycerine. This combination was followed to prevent infection and at the same time promote granulation.

Following a gradual improvement he was discharged on 15/8/24 with instructions on how to care for his wounds and medications were given in the OPD.

5. Conclusion

First the offensiveness had greatly reduced and the pain complained by the patient had gradually reduced. He had steady and gradual improvement. In this case, it can be clearly observed how the treatment was not restricted to Homoeopathy alone and involved other systems to save the patient from disability. It is paramount to consider multidisciplinary approach in case such as DFU where the underlying disease itself is very complicated to control. As instructed by Hahnemann, where needed surgical intervention and external application should be given. The treatment planning and execution often becomes the atlas on which the prognosis of the condition rests upon.

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