

Integrative management of diabetic foot ulcer with Homoeopathy and standard care

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Abstract

Diabetic foot ulcer (DFU) is a serious complication of diabetes associated with severe morbidity leading to poor quality of life and high cost of treatment. Many physicians are of the opinion that effective, multidisciplinary management of foot ulcer is necessary to avoid adverse consequences such as amputation and permanent disability. Homoeopathy offers an effective and safe management of these cases through its unique holistic approach. Here is one such case of chronic DFU, which has been refractory to the conventional management, treated satisfactorily with Homoeopathy. It has been observed that, with homoeopathic treatment, apart from healing of the ulcer, the general health of the patient has also improved.

Keywords: Diabetic foot ulcer, Homoeopathy, Insulin, Plastic surgery, Type 2 diabetes

INTRODUCTION

Diabetes mellitus is a clinical syndrome characterised by hyperglycaemia due to absolute or relative deficiency of insulin, resulting in various long-term complications affecting principally the vascular system and the nervous system.^[1] Asian countries contribute to >60% percentage of the world's diabetic population as the prevalence of diabetes is increasing in these countries.^[2]

Among the various organs of the body that are affected, foot is a frequent site of complications in diabetes. Peripheral neuropathy and peripheral vascular disease can lead to chronic foot ulcers, which are at high risk for infection. If left untreated, infection and ischaemia lead to tissue death, culminating in amputation.^[3] The conventional management of a diabetic foot ulcer (DFU) includes blood sugar control, wound debridement, advanced dressings and offloading modalities. Furthermore, surgery to heal chronic ulcer and prevent recurrence should be considered as an essential component of management.^[4] In spite of all these treatment modalities, DFU is considered as a major source of morbidity and a leading cause of hospitalisation in patients with diabetes. It is estimated that approximately 20% of hospital admissions among patients with diabetes are the result of DFU. On the other hand, once DFU has developed, there is an increased risk of ulcer progression that may ultimately lead to amputation.^[4] It is estimated that approximately 50%–70% of all lower limb

amputations are due to DFU.^[4] The whole spectrum of treatment is costly and is not easily available to a common man.

As a system of medicine, Homoeopathy offers an effective treatment of DFUs both by reducing the symptoms and containing infection from further spread. A prospective observational study ascertaining the role of Homoeopathy in the management of DFU by Nayak *et al.* showed clinical benefits and healing of ulcer with integrative homoeopathic management.^[5] Few case reports on homoeopathic treatment of gangrene due to diabetes have been successfully documented.^[6] This case report adds to the already generated evidence of homoeopathic management of DFU and its complications.

CASE REPORT

On 13th April, 2015, a 70 year old female patient, who was a known diabetic for the past 43 years, presented with an ulcer in the sole of the left foot for 4 years, which was very painful

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Figure 1: Ulcer on 13th April, 2015



Figure 2: Ulcer on 17th August, 2015



Figure 3: Ulcer on 12th October, 2015



Figure 4: Ulcer on 21st December, 2015



Figure 5: Ulcer on 14th March, 2016

to touch and exposure to cold air. She also complained of bleeding gums for the past 3 months.

History of presenting complaints

She was a known diabetic for 43 years and was under oral hypoglycaemic drugs till 2005. In 2005, at the time of her

father's death, she developed severe rise of sugar levels up to 300 mg/dl post-prandial blood sugar (PPBS), after overuse of betnesol injections for asthma. Since then she was kept on Insulin 10 units in the morning and night.

The ulcer was triggered after an injury from a stone, in 2011. Even after 15 days, the injury did not heal and serous discharge started oozing from it. She was hospitalised, for cleansing the wound. Within 1 week after discharge from the hospital, the incised area was infected and was diagnosed to be of fungal origin by another diabetician, which was by repetition of incision and cleaning of the ulcer. Since then, she was getting repeated infection of the area, which was being incised once in every 2–3 months.

In August 2014, she underwent plastic surgery for healing of the chronic ulcer and was hospitalised for about 3 weeks. When the bandage was removed, a small slit was persistent at the site of surgery. Within a month, the slit increased gradually and got infected with discharge of pus and serous fluid. She was suggested by her endocrinologist to go for repeat surgery. But she was reluctant. She used powerful antibiotics with no

Table 1: Follow-up with diabetic foot ulcer assessment scale

	Date								
	13 th April, 2015	11 th May, 2015	15 th June, 2015	17 th August, 2015	12 th October, 2015	21 st December, 2015	2 nd January, 2016	8 th February, 2016	14 th March, 2016
Ulcer on left foot									
Duration	4 years (3)								
Pain	Persistent (3)	Persistent (3)	Persistent (3)	Frequent (2)	Infrequent only on pressure (2)	Infrequent (1)	Slightly present (1)	Absent (0)	Absent (0)
Edge	Shelving (2)	Shelving (2)	Shelving (2)	Shelving (2)	Shelving (2)	Healing (1)	Healed (0)	Healed (0)	Healed (0)
Depth	Upto muscles (2)	Upto muscles (2)	Upto muscles (2)	Upto muscles (2)	Superficial (1)	Superficial (1)	Superficial (1)	Superficial (1)	Superficial (1)
Discharge	Purulent and profuse (3)	Purulent and profuse (3)	Purulent and moderate (3)	Purulent but decreased in quantity (3)	Purulent and scanty (3)	Serous (2)	Absent (1)	Absent (1)	Absent (1)
Odor	Offensive (2)	Offensive (2)	Offensive (2)	Offensive (2)	Less offensive (1)	Absent (0)	Absent (0)	Absent (0)	Absent (0)
Floor	Exudated (3)	Exudated (3)	Exudated (3)	Exudated (3)	Granulated (1)	Granulated (1)	Granulated (1)	Granulated (1)	Granulated (1)
Regional lymphnodes	Palpable on left side (2)	Palpable on left side (2)	Not palpable (0)	Not palpable (0)	Not palpable (0)	Not palpable (0)	Not palpable (0)	Not palpable (0)	Not palpable (0)
Blood sugar	160 (2)	160 (2)	148 (2)	138 (1)	132 (1)	120 (1)	118 (0)	110 (0)	100 (0)
FBS in mg/dl	300 (3)	280 (2)	260 (2)	240 (2)	220 (1)	200 (1)	170 (0)	160 (0)	160 (0)
History of taking allopathic medication									
Insulin dosage in units	Morning-15 Evening-15 (2)	Morning-15 Evening-15 (2)	Morning-15 Evening-15 (2)	Morning-15 Evening-15 (2)	Morning-10 Evening-10 (1)	Morning-10 Evening-10 (1)	Morning-10 Evening-10 (1)	Morning-5 Evening-5 (1)	Morning-5 Evening-5 (1)
Total symptom score	27 (severe)	23 (severe)	21 (moderate)	19 (moderate)	13 (moderate)	9 (mild)	5 (mild)	4 (mild)	4 (mild)
Percentage of improvement	0	14.8	22	29.6	51.9	66.7	81.5	85.2	85.2
Other symptoms									
Perspiration	Profuse and offensive	Moderate and not offensive	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Clay-coloured soft stool	Present	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
Bleeding gums	Present	Present	Decreased by 20%	Decreased by 50%	Decreased by 50%	Decreased by 50%	Decreased by 75%	Decreased by 75%	Absent
Sleeplessness	Present	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent

Contd...

Table 1: Contd....

	Date								
	13 th April, 2015	11 th May, 2015	15 th June, 2015	17 th August, 2015	12 th October, 2015	21 st December, 2015	2 nd January, 2016	8 th February, 2016	14 th March, 2016
Treatment	<i>Hepar sulph</i> 30, 3 doses, once in a week SL-4 pills twice daily - remaining 6 days	SL for 1 month	<i>Hepar sulph</i> 30, - 3 doses, once in a week SL-Remaining 6 days	<i>Hepar sulph</i> 200, 3 doses, once in a week SL-Remaining 6 days	SL for 1 month	<i>Hepar sulph</i> 200, 3 doses, once in a week SL-Remaining 6 days	SL for 1 month	<i>Hepar sulph</i> 1 month, one dose, once in a week. SL-Remaining 6 days	SL for 1 month

Numbers in parenthesis indicate the diabetic foot ulcer assessment score. FBS, PPBS levels, Insulin doses were monitored by endocrinologist. As HbA1C test is not available at the dispensary, the reports regarding the same could not be presented here. SL: Sac lac; FBS: Fasting blood sugar; PPBS: Post-prandial blood sugar; HbA1C: Hemoglobin A1C

ulcer continued to show signs of healing during 9th month of treatment [Figure 4] together with persistent reduction in blood sugar levels.

After about 10 months of treatment with *Hepar sulph*, there was marked reduction in infection and marked healing of the ulcer (85.2% improvement as per the Diabetic Foot Ulcer Assessment Scale) [Figure 5]. The blood sugar levels were also lowered (FBS 110 mg/dl; PPBS 160 mg/dl) and hence the insulin doses were tapered to 5 units twice daily. All these parameters and required doses of insulin were monitored by endocrinologist. The facility for carrying out HbA1C was not available at the centre. Hence, it could not be done. The detailed follow-up of the case has been presented in Table 1.

The Modified Naranjo Criteria, proposed by the clinical data working group of the Homeopathic Pharmacopoeia of the United States, for assigning the causal attribution between homoeopathic medicine applied to the changes occurred in the patient, have been applied to this case and the total score of outcome is 9 [Table 2].^[7]

DISCUSSION

This case report describes usefulness of homoeopathic treatment in chronic diabetic foot ulcer. Chronic DFU who has opted homoeopathic treatment due to recurrence of the ulcer in spite of effective conventional regimen. The homoeopathic remedy *Hepar sulph*, selected based on the tendency to suppuration, marked sensitivity to cold air, profuse perspiration and the history of respiratory affections, caused significant improvement in the local symptoms (marked improvement of the ulcer as per the Diabetic Foot Ulcer Assessment Scale) along with other symptoms such as sleeplessness, bleeding gums, constipation and the blood sugar levels of the patient [Table 1]. The total score of outcome 9 as per the Modified Naranjo Criteria, in this case, shows the definite causal attribution of homoeopathic treatment with the outcome.^[7]

As per literature, *Hepar sulph* is an important remedy for tendency to suppuration, chilliness and hypersensitiveness.^[8]

In a prospective observational study conducted by Central Council for Research in Homoeopathy, the homoeopathic drugs *Silicea*, *Sulphur*, *Lycopodium*, *Arsenicum album* and *Phosphorus* were found to be useful in the treatment of DFU with statistically significant results,^[5] emphasising the effectiveness of Homoeopathy in the treatment of DFU. In this case report *Hepar sulph*, the remedy of choice as per the totality of symptoms of the patient, was found useful in the treatment of DFU.

Thus, the case shows the usefulness of homoeopathic treatment based on holistic approach in the management of DFU.

CONCLUSION

In spite of the multidisciplinary management currently available, DFUs are still associated with considerable morbidity

Table 2: Assessment of outcome with Modified Naranjo Algorithm

Modified Naranjo algorithm	Yes	No	Not sure or N/A
1. Was there an improvement in the main symptom or condition for which the homoeopathic medicine was prescribed?	+2		
2. Did the clinical improvement occur within a plausible timeframe relative to the medicine intake?	+1		
3. Was there an initial aggravation of symptoms?		0	
4. Did the effect encompass more than the main symptom or condition (i.e., were other symptoms ultimately improved or changed)?	+1		
5. Did overall wellbeing improve (suggest using validated scale)?	+1		
6 (a) Direction of cure: did some symptoms improve in the opposite order of the development of symptoms of the disease?			0
6 (b) Direction of cure: did at least two of the following aspects apply to the order of improvement of symptoms: From organs of more importance to those of less importance From deeper to more superficial aspects of the individual From the top downwards			0
7. Did 'old symptoms' (defined as non-seasonal and non-cyclical symptoms that were previously thought to have resolved) reappear temporarily during the course of improvement?			0
8. Are there alternative causes (other than the medicine) that-with a high probability- could have caused the improvement? (consider known course of disease, other forms of treatment and other clinically relevant interventions)		+1	
9. Was the health improvement confirmed by any objective evidence? (e.g. lab test, clinical observation, etc.)	+2		
10. Did repeat dosing, if conducted, create similar clinical improvement?	+1		
Total score			9
N/A: Not available			

and disability. In this particular case, the chronic DFU which was resistant to conventional management responded well to the homoeopathic treatment with improvement in the general health apart from the healing of the ulcer. Thus, this case shows the positive role of Homoeopathy in the management of DFU.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

None declared.

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Editor's Note:- Diabetic Foot ulcer is a complex condition and standard conventional treatment regimen also may not have an easy answer to its resolution. Homoeopathy can play a useful role by improving the tissue susceptibility to insulin or even the quality of insulin. The case report is a good example of what homoeopathy is capable of achieving should a careful assessment of the changes is done. Perhaps a more energetic application of the principles of Posology as well as introduction of deep acting constitutional remedy would bring about an early resolution of the ulcer.

होम्योपैथी और मानक देखभाल के साथ मधुमेह में पैर के अल्सर का एकीकृत प्रबंधन: एक केस रिपोर्ट

सार:

मधुमेह में पैर का अल्सर (डीएफयू) गंभीर विकृति से जुड़ी मधुमेह की गंभीर जटिलता है जिसका संबंध जीवन की खराब गुणवत्ता (क्यूओएल) और उपचार की उच्च लागत से है। कई चिकित्सकों का मानना है कि विच्छेदन और स्थायी विकलांगता जैसे प्रतिकूल परिणामों से बचने के लिए पैर के अल्सर का प्रभावी और बहुआयामी प्रबंधन आवश्यक है। होम्योपैथी अपने अद्वितीय समग्र दृष्टिकोण के माध्यम से इन मामलों का एक प्रभावी और सुरक्षित प्रबंधन प्रदान करती है। जीर्ण मधुमेह पैर के अल्सर एक ऐसा मामला प्रस्तुत है, जो पारंपरिक प्रबंधन के लिए एक चुनौती रहा है, होम्योपैथी द्वारा इसका संतोषजनक ढंग से उपचार किया गया। यह देखा गया कि, होम्योपैथिक उपचार के साथ, अल्सर के उपचार के साथ-साथ, रोगी के सामान्य स्वास्थ्य में भी सुधार हुआ।

Gestion intégrée d'un ulcère du pied diabétique à l'aide de l'homéopathie et de soins courants : Un rapport de cas

Résumé: L'ulcère du pied diabétique (UPD) est une complication grave du diabète associée à une morbidité élevée conduisant à une mauvaise qualité de vie (QdV) et à un coût élevé du traitement. De nombreux médecins sont d'avis qu'une gestion efficace et multidisciplinaire de l'ulcère du pied est nécessaire pour éviter des conséquences fâcheuses telles que l'amputation et l'incapacité permanente. L'homéopathie offre la possibilité d'une gestion efficace et sûre de ces cas grâce à son approche holistique unique. Nous présentons ici un cas d'ulcère du pied diabétique chronique, réfractaire aux thérapies traditionnelles, qui a été traité de manière satisfaisante à l'aide de l'homéopathie. Il a été constaté que le traitement homéopathique contribue non seulement à la guérison de l'ulcère mais améliore également la santé générale du patient.

Manejo integrativo en úlceras del pie diabético con homeopatía y atención convencional: Informe casuístico

Resumen: La úlcera del pie diabético (UPD) es una complicación grave de la Diabetes asociada a una morbilidad severa que lleva a una mala calidad de vida (CdV) y a un coste terapéutico elevado. Muchos médicos saben que, para evitar las consecuencias adversas como la amputación y la discapacidad permanente, se precisa un tratamiento eficaz y multidisciplinario. La homeopatía ofrece un tratamiento eficaz y seguro de estos casos gracias a su enfoque holístico único. Un caso de crónica úlcera del pie diabético, que había sido refractarios al tratamiento convencional, pero tratados satisfactoriamente con la homeopatía se presenta aquí.. Se ha constatado que, con el tratamiento homeopático, además de curar la úlcera, se pudo mejorar la salud general del paciente.

Integratives Management des diabetischen Fußulkus mittels Homöopathie und Standardversorgung: ein Fallbericht

Zusammenfassung: Diabetisches Fußulkus (DFU) ist eine schwerwiegende Komplikation von Diabetes, die mit schwerer Morbidität einhergeht und zu schlechter Lebensqualität und hohen Behandlungskosten führt. Viele Ärzte sind der Meinung, dass eine effektive multidisziplinäre Behandlung von Fußgeschwüren notwendig ist, um nachteilige Folgen wie Amputation und eine dauerhafte Behinderung zu vermeiden. Die Homöopathie bietet eine effektive und sichere Behandlung dieser Fälle durch ihren einzigartigen ganzheitlichen Ansatz. Hier wird ein solcher Fall von chronischem, diabetischem Fußulkus, der nicht auf die konventionelle Behandlung reagierte, aber zufriedenstellend mit Homöopathie behandelt wurde, vorgestellt. Es wurde beobachtet, dass sich bei der homöopathischen Behandlung neben der Heilung des Geschwürs auch der allgemeine Gesundheitszustand des Patienten verbesserte.

糖尿病足潰瘍的順勢療法與標準治療綜合管理：病例報告

摘要：糖尿病足潰瘍(Diabetic Foot Ulcer, DFU)是糖尿病的嚴重併發症，嚴重的發病率導致較差的生活質素(QOL)和高的治療費用。為避免如：截肢和永久性殘疾……等不良後果，許多醫生都認為有必要以有效及多學科的處理來治療足潰瘍。順勢療法通過其獨特的整全治療方法，為這些病例提供有效和安全的處理。這是一個慢性糖尿病足潰瘍的病例，經過常規治療而效果不彰，而經過順勢療法治療後卻有令人滿意的效果。已觀察到透過順勢療法治療，除了潰瘍的癒合外，患者的整體健康狀況也得到改善。