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## A case study on diabetic foot ulcer and its management

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### Abstract

Diabetic foot ulcers are a common complication of poorly controlled diabetes, forming as a result of skin tissue breaking down and exposing the layers underneath. They are most common under the big toes and the balls of the feet, and they can affect the feet down to the bones. All people with Diabetes can develop foot ulcers and foot pain, but good foot care can help prevent them.

One of the first signs of a foot ulcer is drainage from the foot that might stain the socks or leak out into the shoes. Unusual swelling, irritation, redness and disagreeable odour from one or both feet are also commonly early symptoms of a foot ulcer.

The most visible sign of a serious foot ulcer is black tissue (called Eschar) surrounding the Ulcer. This forms because of an absence of healthy blood flow to the areas around the area around the Ulcer. Partial or complete gangrene, which refers to tissue death due to infections, can appear around the Ulcer. In this case, a malodorous discharge, pain, and numbness can occur.

**Case summary:** This is a case of a patient suffering from Diabetic foot ulcer as a complication of unremittent diabetes. The patient was prescribed indicated Homoeopathic remedies. Individualized homoeopathic remedy Arsenicum album was prescribed in centesimal potency which gave a positive result in the treatment of diabetes. In about 2 months the affected R. foot was entirely cured off the symptoms.

**Keywords:** diabetes, foot ulcer, homoeopathy, arsenicum album

### Introduction

Diabetic foot ulcer usually develops as a complication of Diabetes. Signs of foot ulcers are not always obvious. Sometimes symptoms are not clear until the ulcer becomes infected. In this case a malodorous discharge, pain, and numbness can occur.

Causes of Diabetic foot pain and ulcers

Diabetic foot ulcers are most commonly caused by:

- Poor circulation.
- High blood sugar (hyperglycaemia).
- Nerve damage.
- Irritated or wounded feet

Poor circulation is a form of vascular disease in which blood does not flow to the feet efficiently. Poor circulation also makes it more difficult for ulcers to heal.

Diabetic Foot Ulcer is graded on a scale of 0-3 using the following criteria:

1. No ulcer but foot at risk.
2. Ulcer present but no infection.
3. Ulcer deep, exposing joints and tendons.
4. Extensive ulcers or abscesses from infection.

### Pathophysiology

The aetiology of Diabetic foot disease is multifactorial, and includes complications of diabetic neuropathy, vasculopathy, immunopathy, and poor glycaemic control. Diabetic neuropathy results in sensory, motor, and autonomic nerve dysfunction and is the common cause of Diabetic lower extremity ulcers. With proper screening, approximately 75% of diabetic patients undergoing foot and ankle surgery will be found to have neuropathy. Because of an inability to determine injury or trauma, peripheral neuropathy is mostly associated with high rates of skin breakdown and neuropathic fractures. The inciting trauma could be caused simply by ill-fitting shoes or minor sprains and strains or injuries.

The risk of developing a first DFU has been shown to be 7 times higher in those with moderate or severe sensory loss compared to patients with preservation of sensation. Without protective sensation, a neuropathic patient lacks the physical symptoms that would normally cue healthy individuals to examine or rest their feet, thereby increasing the extent of skin damage before presenting for treatment. Autonomic neuropathy also contributes to ulcer formation as it affects both physiologic secretions and the arterio-venous systems leading to dry, flaking, and fragile skin. This increases the risk for fissuring and skin breakdown, creating potential sites of infection. Motor neuropathy can lead to structural changes to the foot. These changes are in part due to muscular imbalance and weakness caused by intrinsic atrophy, frequently manifesting as claw toes, hammertoes, prominent metatarsals, and other deformities. These deformities change pressure patterns on the foot making certain areas more susceptible and vulnerable to trauma or ulceration.

Peripheral Arterial Disease (PAD) is commonly seen in combination with neuropathy, in diabetic population, and can contribute to foot complications. Approximately 50% of patients with diabetic foot disease have some degree of PAD.

### Case study

#### Patient information

A middle aged lady Mrs. Jc, 44yrs who had been suffering from Diabetes mellitus since 14 years developed an injury from an abrasion on her left leg and right mid toe's frontal aspect, during travel in buses. The abraded skin soon started oozing out a fluid. Infection set in, and soon, unknown to the lady, as the lady was busy with her daughter's marriage preparations, the wound deepened and subsequently a sort of deep wound resembling a crater was seen exposing the deep structures of the foot. She initially resorted to allopathic treatment of injection and internal medication for Diabetes to prevent sepsis. But the wounds would not heal. She then resorted to homoeopathy for relief.

#### Personal History

Presently aged 44yrs, Mrs. Jc was born as the 4th child to her parents and was doted upon her by her father but with no proper primary education. She was married off to a distant relative who soon turned out to be a drunkard coercing her into compliance by resorting to violence to run even domestic events. She is a mother of two female children who are married now. She works as a maid to support herself. She reports she became diabetic after Allopathic medication to treat her undeveloped sexual organs after her marriage.

#### H/O Presenting Complaints

She did have a few episodes of drainage of fluid or pus from such abraded wounds but again had resorted to Allopathy treatment Pain with discharge, from the wound. Numb, senseless feeling, sometimes feels legs are made of wood from knee downwards. She cannot put full weight on her foot and ambulate. So she limps and walks.

#### Past History

1. No such episodes in the past.
2. Was bitten by a snake and took allopathic treatment.
3. H/O repeated trauma as a result of Domestic violence.

#### Family History

No relevant history.

#### Patient as a whole/Physical Generals

Appetite: diminished.

Stature: fat, fleshy and overweight.

Thirst: thirsty

Complexion: Wheatish

Sleep: Sleepless till 12:00 midnight.

Constitution: short, broad build

Build & nourishment: well-built & well nourished.

Bowels: Normal.

Aversions: vegetables.

Urine: Normal

Desires: spicy and oily fried foods, non-veg

Perspiration: Normal, on exertion.

#### Mental and Emotional State

Childhood of the patient was very joyous and carefree as she was pampered by her father. Never had formal schooling, does not know to read or write or even speak her mother-tongue properly.

She was married off to her slightly distant relative, who a few years lost interest in her and the family and turned out to be a drunkard and a liability to her and her family of two female children.

She feels very depressed because of her husband's callous attitude but finally she opted to get self-employed and support herself and her children. Despite several unfavorable odds, she managed to sail through her problems with considerable ease.

Generally soft spoken and very mannered speech, genial lively, jovial, jocular and jesting, vivacious, Irritable at times when demands are excessive. Becomes very emotional when she thinks of her state of affairs. Very cooperative, speaks out her difficulties to people to whom she is attached but quickly regains her composure. Hasty and impulsive. Of reasonably good disposition and even-tempered. Though she has been offended badly, of a forgiving disposition.

Of a homely nature, gets angry and weeps. Weeps if situations are unmanageable. Superstitious, pious, religious and ritualistic. Consoled quickly. Curses and swears against herself for her bad state of affairs.

#### Rubrics for Repertorisation

Weeping tendency

Anger consoled

#### Repertory used

Complete Repertory

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