

Case Diabetic Foot Ulcer with Multiple Complications

Govind Singh Bisht*

Sri Balaji Action Medical Institute, New Delhi, India

Introduction

Diabetes foot ulcers are one of the most common complications of diabetes. Management of Diabetic foot ulcer is a team work. Diabetic ulcers are most common cause of lower extremity amputations (LEA). In Peripheral arterial disease (PAD) and Chronic Kidney Disease (CKD) and Coronary Artery Disease (CAD) there is higher incidence of diabetic foot disease and outcomes including amputations and mortality are generally high and desirable results are at times hard to come. Diabetic foot education of primary care physicians and patient can go a long way in prevention of diabetic foot ulcer and lower extremity amputation.

Patient education regarding foot hygiene, nail care, use of proper foot wear, avoiding any kind of extreme temperature conditions like dipping feet in hot water, use of hot water bottle, heating electric pad, exposure of feet to extreme cold conditions are important in avoiding thermal injuries of feet [1-3].

Clinical Presentation

Presenting complaints

65 Years old female was admitted in SBAMI, New Delhi on 25th February 2012. Her primary complaints at the time of admission were breathing difficulty, on and off fever for more than 2 weeks, associated with episodes of nausea and vomiting, swelling all over body and weakness along with non healing ulcer left foot more than 6 weeks for which she had taken treatment at another hospital for 4 weeks including hospitalisation for 2 weeks. The problem of wound in the left foot started after use of hot water bottle on feet.

Past history

Known case Diabetes type 2 since 15 years, Diabetic Peripheral Neuropathy since last more than 7 years, she was diagnosed to have CAD with Cardiomyopathy 4 years back and is known to have CKD since last one year.

Past treatment history

Initially she was inconsistent with her treatment and she used to stop treatment in between, since last 10 years she was on Oral Hypoglycaemic Agents (OHA) till last year, no records available and she does not know the names of the medicines. Since last year when she had high Serum Creatinine levels she was put on Insulin. Her records of last one year show poor control of blood sugar levels with Glycosylated haemoglobin (HbA1c) was mostly ranging between 7.5 to 9.0 mg%. Her Serum Creatinine levels were between 1.8 to 2.5 mg% during last 6 months. There is no history of regular follow up including investigations. She was on medical treatment for her cardiac problems and had never undergone any interventions. During her treatment at other hospital there was not much improvement in her condition, rather her condition was deteriorating by every passing day, as the infection and cellulites was extending to entire foot and lower 1/3 of leg, the surgeon in previous hospital where she was admitted was planning for below knee amputation.

General Examination

General condition of patient was very poor; she was obese, febrile

temp.-100.2 degree F, pale, dyspnoeic, with puffiness of face and oedema of feet. Her pulse was 102/mt and B.P. was 100/70 mm of Hg.

On examination of feet

B/L Paedal Oedema was present, peripheral pulses were poorly palpable in both feet.

Left foot was having an ulcer with cellulites extending to left leg. Ulcer had one opening with necrotic tissue with purulent discharge at mid foot on planter surface and another below the base of 5th toe on lateral side.

On investigation:

HB-6.7 gm%, TLC 27,000, DLC: P86, L12, E02

RBS: 386 mg%

Blood Urea: 108 mg%, S. Creatinine: 2.8mg%, S. Sodium 126 mg%, S. Potassium 5.6mg%.

Total Protein: 6.1 gm%, Albumin 2.1gm%.

Pus C/S: growth was Staph Aureus and E. coli sensitive to Clindamycin, Tazobactam + Piperacilline and other antibiotics.

Arterial Doppler Study of both lower limbs showed diffuse atherosclerotic narrowing of Femoral and Popliteal arteries with biphasic flow in Femoral and Popliteal and mono phasic flow in Dorsalis Pedis and Posterior Tibial arteries.

X-Ray of Left Foot did not show any evidence of bony involvement, MRI or other scan were not done because of monetary constrains. Other investigations were bare minimum. Treatment was based more on clinical findings.

ECHO showed: LVEF 26%,

ECG showed: Old Inferior wall MI

Diagnosis

Diabetes type 2 with Neuropathy with PAD with CKD with CAD with Cardiomyopathy with Left Diabetic Foot with Severe Anaemia with Septicaemia.

Treatment given:

Patient was under care of Medical unit and was referred to Diabetic foot unit for Diabetic Foot management. Opinion of cardiologist and

*Corresponding author: Dr. Govind Singh Bisht, MBBS, CPP (Fellowship in Podiatry, BIDMC, Boston, USA), Visiting Consultant: Podiatry (Foot care) at: Max Healthcare, New Delhi, Sri Balaji Action Medical Institute New Delhi, Sita Ram Bhartia Institute of Science and , Research New Delhi, Clinical Director and Regional clinical Advisor (Asia Pacific), 'Fit Feet Program' of Special Olympics International Residence: Flat No. 76, Cottage Enclave, A-4, Paschim Vihar, New-Delhi, India, 110063, Tel: 09810098463, 011-25278381; E mail: govindsinghbisht@hotmail.com

Received April 26, 2013; Accepted July 01, 2013; Published July 03, 2013

Citation: Bisht GS (2013) Case Diabetic Foot Ulcer with Multiple Complications. Family Med Medical Sci Res 2:106. doi:10.4172/2327-4972.1000106

Copyright: © 2013 Bisht GS. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

nephrologists' taken and for cardiac and kidney problems, Treatment was given as per their advice. Patient was aggressively treated for infection with Tazobactam+Pipracilline combination and Clindamycin. Initially patient was given both antibiotics by parental route for 10 days than followed by 2 weeks of oral Clindamycin.

Blood transfusions (PRBC) were given and regular debridement and daily dressing with recombinant human Platelet Derived Growth Factor (rhPDGF) was done. Patient was very sick and bed ridden, so complete off – loading was possible for good 7-8 weeks.

After 3 weeks of hospital treatment General Condition of patient improved her sugar level was under reasonable control RBS was ranging between 140-200 mg%, haemoglobin was 10.4 gm%, blood urea was 67 mg%, S. Creatinine was 2.1 mg%, her dyspnoea was better. Patient was discharged after 23 days of hospital stay with regular follow up advice with Diabetologist, Cardiologist, Nephrologists' and with advice of daily dressing in Diabetic foot OPD.

Continuous good wound care started showing improvement of diabetic ulcer and complete wound closure was achieved after 10 weeks of continuous and persistent care (Figure1-5).



Figure 1: Patient on 4th day of admission (non healing ulcer of > 6 weeks at other hospital).



Figure 2: After 1 week of wound care in hospital.



Figure 3: After 3 weeks of wound care



Figure 4: After 7 weeks of wound care



Figure 5: After 10 weeks of wound care

Objectives of Treatment

1. Identify and treat infection promptly with rationalise use of broad spectrum antibiotics.
2. Hemodynamic and biochemical stabilisation of patient and manage septicaemia.
3. To achieve complete wound closure.

References

1. Valabhji J (2011) Foot problems in patients with diabetes and chronic kidney disease. J Ren Care Suppl 1:99-108.
2. Armstrong DG, Lavery L (1998) Diabetic Foot Ulcers: Prevention, Diagnosis and Classification. Am Fam Physician 57:1325-1332.
3. Nathaniel Clark (2003) Peripheral Arterial Disease in People With Diabetes. Diabetes Care 26: 3333-3341.