



CODEN [USA]: IAJ PBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF  
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.3235346>Available online at: <http://www.iajps.com>

Research Article

**CASE STUDY ON DIABETIC MELLITUS WITH  
COMPLICATIONS: HYPERTENSION, DEPRESSION, HERPES  
ZOSTER****Shrikrushna Chandrakant Borle\* and Rohini Prabhakar Chavan**

Department of Pham D, District General Hospital, Amravati, Maharashtra-444604 India.

**Article Received:** March 2019**Accepted:** April 2019**Published:** May 2019**ABSTRACT**

*Diabetic Mellitus is a group of metabolic disturbance which described the distinctive feature of hyperglycemia and abnormalities in carbohydrates, fat and protein metabolism. There are several complications of DM includes retinopathy, neuropathy, nephropathy, coronary heart diseases, stroke, and peripheral vascular diseases. A 45yr old female patient was admitted in dermatology ward at district general hospital, Amravati. This case study report refers to a patient presented with complaints of depressed mood, chest pain, weight loss, giddiness, and pain over the back region due to reddish pustules. Laboratory investigation of the patient showed that complete blood count report was normal, HbA1c report was 6.23%, fasting means blood glucose report showed patient was diabetic, ECG reports were normal and ICTC report was normal. We report a case of DM with HTN with depression with herpes zoster which effectively treated with oral anti-diabetic, antihypertensive, antidepressants and antiviral medications.*

*Key Words: Diabetic mellitus, Hypertension, Herpes Zoster, Depression, Antidiabetic drug.*

**Corresponding author:****Mr. Shrikrushna Chandrakant Borle,**Department of Pham D, District General Hospital,  
Amravati, Maharashtra-444604 India.

Phone no: +91 7841950351

Email Id: [shrikrushna14895.sb@gmail.com](mailto:shrikrushna14895.sb@gmail.com)

QR code



Please cite this article in press Shrikrushna Chandrakant Borle et al., *Case Study On Diabetic Mellitus With Complications: Hypertension, Depression, Herpes Zoster.*, Indo Am. J. P. Sci, 2019; 06(05).

**INTRODUCTION:**

Diabetic Mellitus is a group of metabolic disturbance which described the distinctive feature of hyperglycemia and abnormalities in carbohydrates, fat and protein metabolism. Type 1 DM commonly occurs in childhood (5-10% cases) and which is due to autoimmune-mediated destruction of pancreatic beta cells which results in an absolute deficiency of insulin and the autoimmune process mediated by macrophages, T- lymphocyte with autoantibodies to beta cell antigens. Type 2 DM (90%) described a distinctive feature of an unspecified amount of insulin resistance and relative insulin deficiency and insulin resistance characterized by increased lipolysis, free fatty acid production, increased hepatic glucose production, decreased skeletal muscle uptake of glucose. [1]

Some uncommon etiological factors associated with DM include endocrine disorders, gestational DM, pancreatitis, and medications like glucocorticoids, pentamidine, niacin, alpha interferon. There are several complications of DM includes retinopathy, neuropathy, nephropathy, coronary heart diseases, stroke, and peripheral vascular diseases. There is a higher prevalence rate of HTN in DM patients due to the increased insulin resistance.<sup>1</sup> DM can be treated by oral antidiabetic medications and prone to side effect like depression. [2] In DM patient's cellular immunity of patients disturbed which increased the risk of herpes zoster. [3]

Diabetic mellitus is the most common leading cause of morbidity in India. Complications in diabetic mellitus decrease the quality of life of the patient. So, the discuss on complication to decrease complication and reduce the mortality rate.

**CASE REPORT:**

A 45 years old female patient was admitted in dermatology ward at district general hospital, Amravati. A patient had a past medical history of the known case of DM since 4years, HTN since 3years, depression since 1year and past medication history of taking tab Metformin 250mg po bd, tab Amlodipine 5mg po od, tab Sertraline 50mg po od. There was no social history and family history of the patient. Chief complains of the patient were depressed mood, chest pain, weight loss, giddiness, pain over the back region due to reddish pustules. Physical examination was general condition moderate, temperature normal, pulse 82 bpm, bp 130/90 mmHg, pallor negative, respiratory system air entry bilaterally equal, cardiovascular system tachycardia, central nervous system conscious oriented, per abdomen soft.

Complete blood count was WBC  $4.12 \times 10^3/\mu\text{L}$ , RBC  $3.84 \times 10^6/\mu\text{L}$ , PLT  $105 \times 10^3/\mu\text{L}$ , lymphocyte 22.3%, mid cells 8.2%, neutrophils 75.5%, Hb 11.6g/dl, MCV 60.20fL, HCT 27.3%, MCH 23.2pg, MCHC 28.9g/dl, RDW CV 18.2%, RDW SD 58fL. Glycated hemoglobin A1C (HbA1c) level was 6.23%, average blood glucose level was 132.10mg/dl, ECG reports within normal limit. On the basis of history, chief complaints and diagnostic test, treatment advice was tab Metformin 250mg bd, tab Ondansetron 4mg bd, tab Amlodipine 5mg od, tab Atorvas 40mg od, tab Acyclovir 800mg 5 times a day, Lactocalamine lotion for local application, tab Sertraline 50mg od for 7 days. A patient diagnosed as DM with HTN, depression, herpes zoster. The patient felt better after 7 days of treatment, but symptoms remain the same. The patient was discharged with treatment as Dexamethasone 2cc stat, tab Paracetamol 500mg bd, tab Rantac 150mg bd, tab Diclofenac 50mg bd, tab Tryptomer 25mg bd, tab Nurokind- g for severe pain, tab Sertraline 50mg od. After 1 month, herpes zoster was corrected; blood sugar level maintains within normal range and improves depressive symptoms.

**DISCUSSION:**

Before making a diagnosis of diseases which related to diabetic mellitus complication were ruling out as they cause due to DM or other reasons.

Hypertension commonly complication occurs in DM. Hypertension is increase force of blood against the wall of blood vessels. It is also called high blood pressure. Risk of hypertension is twice in diabetic mellitus patients than other people. Hypertension in diabetic mellitus leads to renal, cardiovascular and retinal complications. The rate of mortality was more in HTN and DM patients than patients have of HTN and DM separately. Hence, the patients have DM and HTN need more attention to achieving the treatment goal. [1]

The depression was more prevalence in diabetic patients than a non-diabetic person. Depression is felling of severe despondency and dejection. The study conducted by Line I Berge *et al.* showed that depression was more in a diabetic patient due to oral anti-diabetic treatment hypoglycemic agent. Depression was not related to insulin. It is only caused due to oral treatment for diabetic. Find out the cause of depression with diabetic was complicated because it may the cause of the side effect of oral hypoglycemic agents. [2,4]

The severity of infectious disease in diabetic mellitus was more prone due to dysfunction of cellular immunity. The herpes zoster caused by virus

*varicella-zoster* which lies in the body in the dormant stage. Diabetic mellitus was a more common risk factor in herpes zoster. Herpes zoster gets suitable environment i.e. high blood sugars to multiply. [3]

These three completions, HTN, depression and herpes zoster with DM were lead to decrease the patient quality of life. The prevention should be taken with medication to avoid completions in DM and to reduce morbidity.

### CONCLUSION:

We report a case on DM with HTN with Depression with herpes zoster, effectively treated with oral antidiabetic, antihypertensive, antidepressants and antiviral medications. A specification in laboratory tests should be there. The severity of DM with completion avoided by monitor the therapy and taking precautions.

### ACKNOWLEDGEMENT

The author expresses thanks to the district general hospital, Amravati for gave permission to study the case.

### CONFLICT OF INTEREST

The authors declare no conflict of interest.

### ABBREVIATIONS

BD: Twice a day; DM: Diabetic mellitus; Hb: Hemoglobin; HCT: Hematocrit; HTN: Hypertension; OD: Take at bedtime; MCH: Mean cell hemoglobin; MCHC: Mean corpuscular hemoglobin concentration; MCV: Mean corpuscular volume; OD: Once day; PLT: Platelet; PO: Peroral; RBC: Red blood cell; RDW: Red blood cell distribution width; TAB: Tablet; WBC: White blood cell.

### REFERENCES:

1. Venugopal K, Mohammed MZ. Prevalence of hypertension in type-2 diabetes mellitus. *CHRISMED Journal of Health and Research*. 2014 Oct 1;1(4):223.
2. Berge LI, Riise T, Tell GS, Iversen MM, Østbye T, Lund A, Knudsen AK. Depression in persons with diabetes by age and antidiabetic treatment: a cross-sectional analysis with data from the Hordaland Health Study. *PloS one*. 2015 May 26;10(5):e0127161.
3. Lal DM, Rashid A, Anwar MI. Frequency of undiagnosed diabetes mellitus in patient with herpes zoster. *Journal of Pakistan Association of Dermatology*. 2016 Nov 20;25(3):182-5.
4. Bădescu SV, Tătaru C, Kobylynska L, Georgescu EL, Zahiu DM, Zăgrean AM, Zăgrean L. The

association between Diabetes mellitus and Depression. *Journal of medicine and life*. 2016 Apr;9(2):120.