

- Treatment of type 2 DM may favorably alter the natural history of DM, diagnosis of prediabetes should spur efforts for diabetes prevention.

The ADA recommends screening all individuals >45 years every 3 years and screening individuals at an earlier age if they are overweight (BMI >25 kg/m² or ethnically relevant definition for overweight) and have one additional risk factor for diabetes. In contrast to type 2 DM, a long asymptomatic period of hyperglycemia is rare prior to the diagnosis of type 1 DM.

COMPLICATIONS ASSOCIATED WITH DIABETES MELLITUS TYPE 2

Microvascular :

- Eye disease Retinopathy (nonproliferative/proliferative)
- Macular edema
- Neuropathy Sensory and motor (mono- and polyneuropathy)
- Autonomic Nephropathy (albuminuria and declining renal function)

Macrovascular :

- Coronary heart disease
- Peripheral arterial disease
- Cerebrovascular disease

Others :

- Gastrointestinal (gastroparesis, diarrhea)
- Genitourinary (uropathy/sexual dysfunction)
- Dermatologic Infectious
- Cataracts

Apart from screening other tests that are significant in the tracking and management of diabetes mellitus type 2 are :

HBA1C test :

- This test measures the average amount of glucose attached to Hb, over past 3 months.
- This helps to monitor the progression in the management of the disease.

CLINICAL CASE 3

A 75 years old female who has been diagnosed with DM type 2 since 2013. She has weight : 56kgs, height : 4'10" and has a BMI of 25. On monitoring glucose randomly shows average blood glucose levels as 180mg/DL . The patient is hypertensive. She had complaints of complete loss of sensation in left foot and now has complains about loss of sensation in right foot too. Patient had a history of coronary artery bypass graft, but the HBA1c remained at 20.5%. She was earlier prescribed with Metformin and Lantus with the doses being simultaneously increased.

Now she is prescribed with :

- **Metformin 850mg – 2 daily**
- **Lantus 30-35 units**
- **Novolog (sliding scale)**
- **Lisinopril 2.5 mg daily**
- **Simvastatin 40mg daily**
- **Neurontin 300 mg**

Rationale :

➤ **METFORMIN : Biguanide (AMPK activator)**

- Metformin suppresses the hepatic gluconeogenesis and glucose output from liver. This is the major action responsible for the lowering of blood glucose in diabetes.
- Metformin enhances insulin mediated glucose uptake and disposal in skeletal muscle and fat. Insulin resistance exhibited by type 2 diabetics is thus overcome
 - Glycogen storage in skeletal muscle
 - Reduced lipogenesis in adipose tissue and enhance fatty acid oxidation.
- Interferes with mitochondrial respiratory chain and promotes peripheral glucose utilisation through anaerobic glycolysis.
- Metformin also reduces intestinal absorption of glucose.

➤ **ATORVASTATIN: it is a HMG-COA REDUCTASE INHIBITOR (STATINS)**

- Best tolerated hypolipidaemic drug.
- It reduces cholesterol synthesis by 55 to 60%
- As a result in compensatory it increase in LDL receptors s expression on liver cells and increase the receptor mediated uptake and catabolism of LDL
- Has additional antioxidant properties.

➤ **BIPHAGIS INSULIN ISOPHANE :**

- Insulin isophane is an intermediate-acting insulin that starts to work within 2 to 4 hours after injection, peaks in 4 to 12 hours, and keeps working for 12 to 18 hours.
- Insulin isophane is used to improve blood sugar control in adults and children with diabetes mellitus.

➤ **Telmisartan :**

- It is an antihypertensive drug.
- And has also shown improvement in the kidney condition with occurs as a complication of diabetes.

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