

DIABETES: THE SILENT KILLER

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ABSTRACT-The chronic metabolic disorder diabetes mellitus is a fast-growing global problem with huge social, health, and economic consequences. It is estimated that in 2010 there were globally 285 million people (approximately 6.4% of the adult population) suffering from this disease. This number is estimated to increase to 430 million in the absence of better control or cure. An ageing population and obesity are two main reasons for the increase. Furthermore it has been shown that almost 50% of the putative diabetics are not diagnosed until 10 years after onset of the disease, hence the real prevalence of global diabetes must be astronomically high. This study introduces the types of diabetes and diabetic complications such as impairment of immune system, periodontal disease, retinopathy, nephropathy, somatic and autonomic neuropathy, cardiovascular diseases and diabetic foot. Also included are the current management and treatments, and emerging therapies.

KEY WORDS: Type I or Juvenile diabetes, Type II or Adult Onset diabetes Causes and Medication.

INTRODUCTION

Diabetes is a chronic metabolic disease in which the either doesn't produce or doesn't fully utilize insulin. As a result, it cannot properly metabolize carbohydrates, and to a lesser extent, protein and fat. Glucose (sugar) builds up in blood; to get rid of the excess, the kidneys begin to excrete it in urine.

Although excessive is circulating, the brain and other tissues need it for the fuel are unable to use it. The body begins to breakdown the fat and protein in attempt to provide an alternate source of fuel, resulting in serious biochemical imbalances. In the meantime, the high level of glucose are damaging structures throughout the body, increasing the risk of complications such as heartattack, blindness, kidney failure, stroke and painful nerve problems. Despite effective treatments, diabetes is a leading cause of death.

There are two major forms: type I, in which body stops making insulin completely, and type II, in which the body produces inadequate insulin or is unable to use it fully. The first type also called insulin-dependent or juvenile diabetes, usually develops during first 20 years of life when islet cells in pancreas are destroyed and can no longer make insulin. Symptoms are frequent urination, weight loss, unusual thirst, weakness, fatigue and hunger.

Type II, also called non-insulin dependent or adult-onset diabetes, is most common among overweight older people, although it can occur in persons of normal weight. It develops more slowly than Type I; indeed, many individuals have the disease for years without knowing it. In addition to symptoms experienced in Type I diabetes, signs may include frequent infections, cramps and tingling sensation, slow healing, impotence in men, and chronic vaginitis in women.

The cause of diabetes is unknown, but researchers believe that Type I develops when the immune system destroys the islet cells. The disease tends to run in families, so there may be a genetic component.

OBJECTIVE

The objective of this study was focused on the prevalence of diabetes with reference to age and life style.

METHODOLOGY

The diabetic cases of different age groups were studied. Diagnosis is based on the blood test that measures blood glucose levels. Elevated blood glucose doesn't necessarily indicate diabetes, but it does call for more extensive testing. In general, a diagnosis is established if two separate blood tests, done after fasting for eight hours, show glucose levels of 140mg/dl. In borderline, a glucose challenge test may be ordered. This involves measuring glucose after fasting, and again after drinking sugar water.

A CASE IN POINT

According to a study, a person developed Type I diabetes, he was put on the standard regimen for that time-a strict diet and daily shot of lente insulin, a form that works for 18 to 24 hours. His urine sample was taken for glucose test each morning. Over the next few years, his diabetes went out of control. And the unstable diabetes was reflected in damage to his eyes and kidneys.

Blood glucose was measured instantaneously. Heretofore, urine sample was taken, but by the time glucose showed up in the urine, blood levels may have been dangerously high for hours or even days. After the results of a blood test, adjustments was made in his insulin dosage to avoid dangerous fluctuations. "If that didn't work, then he was one of the unlucky ones whose diabetes couldn't be controlled." His blood glucose had been checked several times a day, and a careful diary of test results, food intake, exercise, and other factors affecting insulin needs was maintained. Adjustments in the insulin dosage was made by calculating how much would be needed to metabolize a specific amount of food, and how to make further adjustments for exercise. He was shifted to a combination of insulins divided into three or more daily doses, which permitted further fine-tuning and adjustments to maintain normal blood glucose levels.

After nearly a decade, his diabetes remain in check. His kidney function has actually improved and there has been no further damage to his eyes.

DISCUSSION

There is no cure for either type of diabetes, but the disease can be controlled with a combination of therapies. People with Type I need regular insulin injections and special diet and exercise regimen. They must also measure their own blood sugar (see self-treatment).

More than 80 percent of people with Type II diabetes can control it with just diet and exercise, especially if they lose weight. Others may need oral hypoglycemic to increase insulin production and its effectiveness. These drugs include chlorpropamide (Diabnise), glipizide (Glucotrol), glyburide (Diaseta and Micronase), tolbutamide (Orinase), and tolazamide (Tolinase). A new Type II drug, acarbose (Precose), works by delaying the digestion of carbohydrates, resulting in a slower rise in blood glucose.

Patients with both types of diseases require extra medical care and should establish a close working relationship, usually an internist or endocrinologist. Because diabetes affects especially the heart, blood vessels, kidneys, nerves, and eyes, other specialists may be needed. For example, an ophthalmologist should be seen at least every 6 to 12 months to check for diabetic retinopathy. If unchecked, this bleeding can lead to blindness.

Cardiovascular complications, such as high blood pressure and coronary artery disease, are particularly common in diabetes. A significant number of patients develop kidney failure, and require dialysis or a kidney transplant. Reduced circulation to the legs and feet may lead to the need for vascular surgery or even amputation.

A study showed that maintaining normal blood sugar levels dramatically slows the progression of complications. More doctors are now encouraging diabetic patients to follow a regimen that maintains blood glucose levels as near to normal as possible. This involves frequent glucose monitoring (at least four times a day), adjustment of insulin or other medication dosages, changes in exercise patterns, and alteration of timing, frequency, and content of meals and snacks.

To make insulin injections easier, there is now an insulin pump, which is carried in a pocket or worn in a belt. It can be programmed to administer small amounts of insulin at specific times through a syringe left in place in the abdomen or other convenient site.

Alternative therapies are helpful as adjuncts to medical treatment.

Exercise Conditioning. This improves the body's ability to use insulin. Type I patients who exercise regularly can lower their insulin dosage and Type II patients can often eliminate the need for oral hypoglycemic. Exercise also improves circulation, and may help prevent leg and foot problems.

Homeopathy. Practitioners may prescribe phosphorus to help stabilize blood sugar levels.

Meditation, Self-Hypnosis, and Yoga. These other relaxation techniques can help lower the level of stress that may elevate the blood glucose.

Nutrition Therapy. The basic diabetic diet is described under self-treatment. In addition, many dietitians urge eating beans regularly, as they can help blunt the post-meal rise in glucose levels.

A diabetes diet is similar to the healthful diets now recommended for all people: Obtain most of your calories from complex carbohydrates, such as vegetables, legumes, fruits, and whole grains, and rely less on animal foods for protein. Avoid refined sugars and restrict fat and cholesterol intake to help reduce the risk of heart disease.

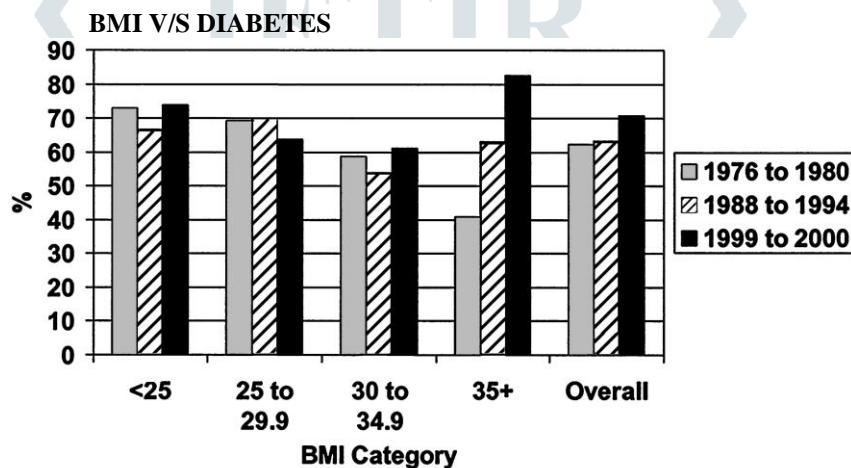
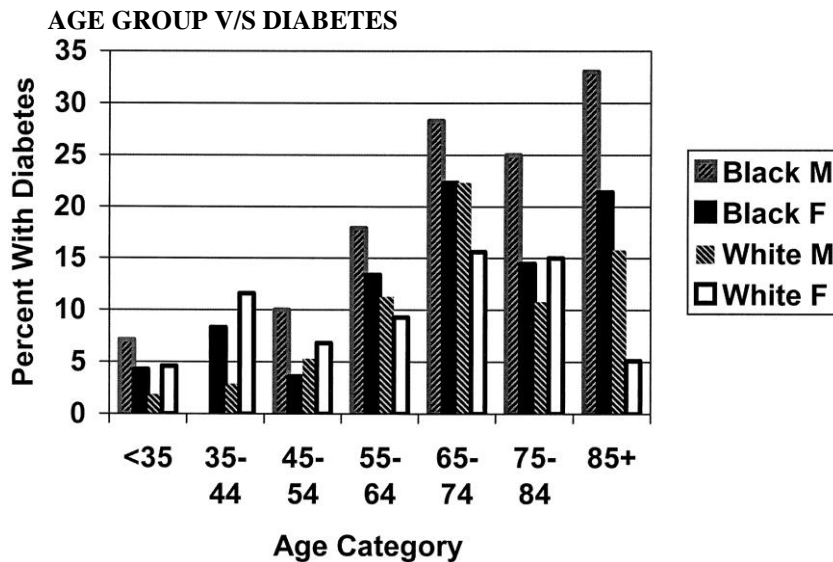
People with diabetes often have poor circulation and are susceptible to skin ulcers, especially on legs and feet. Fit shoes carefully to avoid corns and other foot problems that can develop into a series of infection. Also keep toe nails trimmed. If you have difficulty caring for your feet, see a podiatrist.

OTHER CAUSES OF HIGH BLOOD SUGAR

Certain medications can raise blood sugar. So too can disease affecting the pancreas. Pregnant women sometimes develop gestational diabetes, which can be detected with a blood glucose test.

SIGNS OF AN INSULIN OVERDOSE

- A tingling sensation in the mouth, the fingers, or the other parts of the body.
- A cold clammy feeling.
- A buzzing in ears.
- Excessive sweating.
- A feeling of weakness or faintness.
- Headache.
- Hunger.
- Paleness.
- Abdominal pain.
- Irritability and a change in mood.
- Impaired vision.
- Rapid heartbeat and trembling.
- Sudden drowsiness.
- Sudden awakening from sleep, especially if it is accompanied by any of the above symptoms.



Probability of increase (%):	49.2	47.5	51.8	99.8	62.4
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CONCLUSION

It was observed that the effect of diabetes with reference to age and life style will vary.

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