Challenges and Strategies for Prevention Understanding Diabetes Mellitus

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Abstract: *Diabetes mellitus is a metabolic disorder with an increasing incidence and global prevalence. High blood glucose levels are symptomatic of diabetes mellitus as a consequence of inadequate pancreatic insulin secretion or poor insulin –directed mobilization of glucose by target cell. (1) Diabetes mellitus is aggravated by and associated with metabolic complication that can subsequently lead to premature death. The diagnosis of diabetes in an asymptomatic subject should never be made on the basis of a single abnormal blood glucose value for the asymptomatic person, at least one additional plasma and blood glucose test result with a value in the diabetic range is essential, either fasting from a random sample, or from the oral glucose tolerance test (2). If sample fail to confirm the diagnosis of diabetes mellitus, it will usually be advisable to maintain surveillance with periodic re testing until the diagnostic. (3)*

Keywords: Diabetes mellitus, diagnosis, high blood glucose level, metabolic disorder, insulin secretion, glucose, mobilization, metabolic complication

1. Introduction

Diabetic Mylitus is a diabetic disorder by elevated blood glucose levels and destitution of carbohydrate and fats and metabolism rates. dibeties is metabolism. dibeties occurs either because of lack of insulin and because of lack of factors that appose of the action of insulin. The result of the insufficient action of insulin is an increase in blood glucose level of concentration (hyperglycemic). (4) It is an often simply referred to as a diabetes is a group of metabolic disease in which a person has high blood glucose either because the body does not produce enough insulin or because cell does not respond to insulin that is produce.
Polydipsia (increased thirst)
Polyphagia (increased hung)
Polyuria (frequently urination)

Situation become clear. in these circumstance, the clinician should take in these circumstance, the clinician should take into consideration disorders, before deciding on a diagnostic or therapeutic course of action. An alternative to blood glucose estimation or the OGTT has long been sought to simplify the diagnosis of diabetes. Diabetes is a metabolic disorder that can be prevented through lifestyle modification and control of overweight and obesity and diet control. Education of the populace is still key to the control of this emerging epidemic (5). Novel drug are being developed, yet no cure is available in sight for the disease, despite new insight for the disease, despite into the pathophysiology of the diabetes, type 2 diabetes.
There are three types of diabetes

This high blood glucose produces the classic symptoms:
- Type 1 Diabetes: A chronic condition in which the pancreas produces little or no insulin.
- Type 2 Diabetes: A chronic condition that affects the way the body processes blood sugar. (6)
- Gestational diabetes: A form of high blood sugar affecting pregnant women.

Prevention on diabetic mellitus
Type 1 and type 1.5 diabetes are not preventable because they are caused by an issue with the immune system. Some causes of type 2 diabetes such as your genes or age are not under your control either. Yet many other diabetes risk factors are manageable. Most diabetes prevention strategies involve making simple adjustments' to your diet and fitness routine. If you have received a diagnosis of prediabetes, here are a few things you can do to delay or prevent type 2 diabetes.

Get at least 150 minutes per week of aerobic exercises like walking or cycling. (7) Cut saturated fat and Tran's fat, along with refined carbohydrates, out of your diet eat more fruit, vegetable, and whole grains. Eat smaller portions. Try to lose5% to 7% trusted source of your body weight if you have over weight or obesity. The goals of diabetes prevention include preventing the onset of diabetic. Preserving beta cell function. Preventing micro vascular and cardiovascular. Preserving beta cell function preventing micro vascular and cardiovascular complication. Ultimately, reducing costs of diabetes care as therapeutic target, prevention of beta cell function may be particularly important as beta cell failure largely underlies the transition from prediabetes states to diabetes. Treatment

Depending on what type of diabetes you have, blood sugar monitoring, insulin and oral drugs may be part of your treatment. Eating a healthy diet, staying at a healthy weight and getting regular physical activity also are important parts of managing diabetes.

Treatments for all types of diabetic
Currently, there are no generally accepted guidelines regarding treatment pathways for type 3c diabetes mellitus. Yet, a first step was taken at Pancreas Fest 2012 (8) The pharmacological agents typically used for the treatment of type 3c diabetes mellitus are the same as for type 2 diabetes mellitus. The ADA and the EASD recommend metformin as the first - line oral therapy for type 2 diabetes mellitus (9). Therefore many type 3c diabetes mellitus patients are

initially treated with metformin as a drug of first choice. If hyperglycemia is rather mild and concomitant insulin resistance is additionally diagnosed or suspected, therapy with metformin may be a good choice in the absence of contraindications. However, metformin treatment might not be tolerated by a majority of patients since its main side effects include nausea, abdominal complaints, and diarrhea and weight reduction. A patient with chronic pancreatitis will probably not tolerate these symptoms. Since metformin therapy proofs capable of reducing the risk of pancreatic cancer by as much as 70%, however, its anti - diabetic and anti - neoplastic effects may be beneficial in patients with type 3c diabetes mellitus due to chronic pancreatitis (10). This holds especially true since chronic pancreatitis and diabetes mellitus are both well accepted risk factors for the development of pancreatic cancer (11).

Incretion based therapies [*e. g*., glucagon - like peptide - 1, (GLP - 1 -) analogues, dipeptidyl peptidase (DPP) - IV - inhibitors] also enhance insulin secretion. Yet, GLP - 1 - analogues as well as DPP - IV - inhibitors are both associated with a higher risk of pancreatitis and are reported to have a high frequency of prominent gastrointestinal side effects (*e. g*., nausea, delayed gastric emptying, weight loss) (12). Therefore their use should best be avoided at present time until their safety is confirmed. A better and probably safer way to positively influence the incretion system might be a proper supplementation with pancreatic enzymes in these patients as discussed below. (13)

In early type 3c diabetes mellitus, oral therapy with insulin segretagogues (sulfonylurea and glinides) may also be considered, thiazolidines should be avoided due to prominent side effects (*e. g*., bone fractures, fluid retention, congestive heart disease). Chronic pancreatitis, however, must be seen as a progressive disorder and many patients will eventually require insulin therapy. Patients should then be treated using general insulin dosing guidelines as established for type 1 diabetes mellitus. In patients with severe malnutrition insulin therapy is commonly used as a therapy of first choice. This is due to the desired anabolic effects of insulin in this special subset of patients. (14)

Insulin pump therapy may also be considered for patients who experience a brittle form of diabetes mellitus despite being sufficiently motivated. AS it is in the other diabetes types, initial treatment should include all efforts to correct lifestyle factors which contribute to hyperglycemia and the risk of pancreatic malignancy (*e. g*., abstinence from alcohol and smoking cessation, weight loss in overweight subjects, physical exercise and dietary modifications).

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