What is cystic fibrosis-related diabetes (CFRD) and how does it affect you?

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Introduction

Cystic fibrosis–related diabetes (CFRD) is a cystic fibrosis consequence (CF). CF is a hereditary illness in which your body's mucus becomes thick and sticky. It has an impact on a variety of organs and body systems, including the pancreas. It will be difficult for your pancreas to produce enough insulin to remove sugar from your bloodstream if it becomes too damaged. You will get diabetes if this occurs. This page will go through the signs and symptoms of CFRD, how it's diagnosed and treated, and how it impacts cystic fibrosis patients [1].

How does CFRD grow?

Cystic fibrosis is caused by a mutation in the cystic fibrosis transmembrane conductance regulator (CFTR) gene.

This gene produces a protein that aids in the thinned and free movement of mucus around your organs and tissues. It also aids the correct functioning of your lungs, digestive system, and pancreas. Mucus becomes thick and sticky as a result of the mutation. 4 CFRD is one of the most serious consequences of CF, caused by mucus injury to the pancreas [2].

CFRD is classed as type 3c diabetes mellitus by the American Diabetes Association (ADA) (T3cDM). The illness of the pancreas causes this type of diabetes. 5 T3cDM symptoms, diagnosis, and care differ from type 1 diabetes (in which your body produces little to no insulin) and type 2 diabetes (in which your body produces a lot of insulin) (the insulin made in your body does not work properly).

CFRD signs and symptoms

CFRD frequently manifests itself without symptoms at first. Hyperglycemia (high blood sugar) can occur as a result of lung infections or corticosteroid treatment. Other diabetic symptoms, such as excessive thirst and increased urination, could be mistaken for CF symptoms [3].

Feeling more weary than normal is another indicator to watch out for:

- Loss of weight or inability to maintain a healthy weight
- Poor development or puberty delay in children
- Exacerbations of the lungs are becoming more common (flare-ups)

CFRD diagnosis

Because CFRD is typically asymptomatic, routine screening can aid in early detection. The American Diabetes Association and the Cystic Fibrosis Foundation propose that CFRD be diagnosed with a two-hour 75-gram oral glucose tolerance test (OGTT). Patients with CF who are 10 years or older should be examined once a year. Diabetes diagnosis criteria for patients with CF will be varied. In people with CF, blood sugar levels that are considered prediabetes in the general population may be deemed normal.

Treatment for CFRD

For CFRD patients, oral diabetic medication is not currently indicated. The most effective treatment is insulin therapy. This will entail the administration of rapid-acting insulin prior to meals. A combination of rapid-acting and slow-acting basal insulin may be utilised for patients with hyperglycemia between meals [4,5].

If you have CFRD, the current blood sugar level objectives are as follows:

- Blood sugar levels should be between 70 and 130 mg/dL when fasting.
- Two hours after a meal, the blood sugar level is below 180 mg/dL.

An illness can cause transient insulin resistance in people with CFRD. Until your disease goes away, you'll need higher doses to keep your blood sugar under control.

References

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