Significant risk factors of diabetes mellitus and its remedies.

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Remedies of Diabetes Mellitus

Diabetes is brought on by a variety of pathologic processes. These can range from autoimmune destruction of the pancreas' Beta-cells, which causes insulin insufficiency, to abnormalities, which cause insulin resistance. Due to insulin's inadequate impact on target tissues, diabetes produces abnormalities in glucose, lipid, and protein metabolism. Insulin shortage is caused by insufficient insulin secretion and/or diminished tissue responses to insulin at one or more points along the intricate hormone action pathways [1]. Insulin secretion and insulin action deficits frequently coexist in the same patient, making it difficult to pinpoint which abnormality, if either, is causing hyperglycemia dysfunction.

Complications of Diabetes Mellitus

Diabetic retinopathy

Diabetic retinopathy is a condition that causes damage to the eyes as a result of diabetes. Blood vessels of the light-sensitive tissue at the back of the eye (retina) is damaged. At first, diabetic retinopathy may cause no symptoms or very moderate vision changes. It does, however, have the potential to result in blindness. Diabetes can strike anyone with type 1 or type 2 diabetes. The longer you have diabetes and the less well your blood sugar is regulated, the more likely this eye problem may develop.

Symptoms

1. Spots or dark strings floating in your vision (floaters)
2. Blurred vision
3. Fluctuating vision
4. Vision loss

Treatment of diabetic retinopathy

Blood glucose and blood pressure control are essential; extensive blood glucose control decreases the evolution of retinopathy. Anti-VEGF medicines (e.g., ranibizumab, bevacizumab, aflibercept) and/or focused laser photocoagulation are used to treat clinically severe diabetic macular edoema. Eyes with persistent macular edoema can be treated with an intraocular dexamethasone implant and intravitreal triamcinolone. For patients with chronic diabetic macular edoema, an intraocular fluocinolone implant is offered in some countries. Recalcitrant diabetic macular edoema may benefit from vitrectomy [2]. Panretinal laser photocoagulation may be employed in some situations of severe nonproliferative retinopathy; however, in most cases, panretinal laser photocoagulation can be postponed until proliferative retinopathy develops.

Panretinal laser photocoagulation should be used to treat proliferative diabetic retinopathy with high-risk features such as vitreous haemorrhage, substantial preretinal neovascularization, or anterior segment neovascularization/neovascular glaucoma. Anti-VEGF medicines used intravitreally have also been shown to be effective in the treatment of proliferative diabetic retinopathy in recent investigations. The chance of serious vision loss is considerably reduced with these treatments [3].

Diabetic nephropathy

Diabetic nephropathy is the most common cause of nephrotic syndrome in adults. Diabetic nephropathy is the most common cause of end-stage renal disease in the United States, accounting for up to 80% of cases. Renal failure affects about 40% of persons with type 1 diabetes. Renal failure is widespread in persons with type 2 diabetes, with a prevalence of 20 to 30%, but this number is likely exaggerated. Renal failure is more common in several ethnic groups, such as blacks, Mexican-Americans, Polynesians, and Pima Indians [4].

Symptoms

Early stages of diabetic nephropathy are asymptomatic. The first warning symptom is persistent microalbuminuria. In most untreated individuals, hypertension and some degree of dependent edoema develop. Patients with diabetic nephropathy may develop symptoms and indicators of uremia (eg, nausea, vomiting, anorexia) earlier (ie, with a greater glomerular filtration rate [GFR]) than those without, probably because the combination of end-organ disease (ie, neuropathy) and renal failure increases symptoms.

Treatment of diabetic nephropathy

The primary treatment is stringent glucose management to keep HbA1C below 7.0; while maintaining euglycemia lowers microalbuminuria, it may not slow disease progression once diabetic nephropathy has developed [5].

Glucose control must be followed by careful blood pressure control of 130/80 mm Hg, while some specialists now advocate blood pressure of 140/90 mm Hg. Some experts recommend a blood pressure range of 110 to 120/65 to 80 mm

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Hg, especially in patients who excrete more than 1 g of protein per day; nevertheless, others believe that blood pressure levels below 120/85 mm Hg are linked to higher cardiovascular mortality and heart failure.

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