

Method: A 58-year male presented with acute onset sharp pain and swelling in left mid thigh for 25 days without history of trauma or fever. The pain worsened on limb movement and did not radiate to calf. He was diabetic for 20 years with poor glycemic control. He also had bilateral non-proliferative retinopathy and CKD being treated conservatively. Left thigh was edematous, tender, larger than right, with induration and mild erythema on overlying skin but without warmth, bullae, greyish hue, or crepitus. We started IV insulin and IV antibiotics, but even after 3 days, thigh swelling did not improve.

Results: Investigations showed: Hb-7.2 gm%, Creatinine-6.2 mg/dl, Urea-96 mg/dl, and TLC, Na, K, ESR, CRP, LFTs, Total CPK and lower limb doppler were normal. Local CT did not show any fracture. Ultrasound thigh showed subcutaneous edema without any local abscess and MRI thigh had increased signals on T2-weighted images and hypointense signals on T1-weighted images in Vastus Lateralis, Vastus Medialis, Adductor Longus and Brevis muscles of Left Thigh with heterogenous post-contrast enhancement. Diagnosis of diabetic myonecrosis was made and he was further managed conservatively, without higher antibiotics, anticoagulation or steroids. He improved significantly after 2 weeks with reduced thigh swelling and improvement in limb mobility and pain.

Conclusion: Diabetic Myonecrosis is a rare complication of diabetes mellitus related to microangiopathic changes that lead to muscle infarct, seen in patients with longstanding poorly controlled diabetes, especially with CKD. It should be suspected when such patients develop localized lower limb muscle pain and swelling without systemic signs. MRI scan is sufficient for diagnosis, which avoids the need for invasive procedures like muscle biopsy. It is managed conservatively with good prognosis.

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Herbal Cellular Concentrate for Chronic Type 2 Diabetes Treatment, Uncontrolled on OHA a Pilot Study

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Background: nowadays, there is an increasing interest in the use of alternative approaches for treating insulin resistance, and T2D Chicory significantly reduces blood sugar and glucose fluctuations, increases metabolism due to inulin in type 2 diabetes patients with excess weight. Equisetum arvense[1] is one of the most effective plants for blood sugar, stabilizing metabolism, and hormone production. Tuberous roots are rich in inulin, enabling glucose utilization in the human body, and can potentially ameliorate insulin sensitivity in diabetic patients. Blueberry leaves improve insulin sensitivity and action. Galega officinalis [2] lowers blood sugar levels for prediabetes and type-2 diabetes patients.

Aim: To evaluate the effect of Herbal concentrate of 11 herbs from Siberia by Vitalang bio approved to be used in Type 2 diabetes.

Method: herbal, natural, and chemical drugs are recommended for people with diabetes. However, more scientific studies are needed to confirm the effectiveness of herbal and natural supplements.

In this study we selected 150 type 2 Diabetes who were uncontrolled on OHA and insulin for last 5 years and divide in three group and started with 1 gm on herbal concentrate fine powder manufactured by Vitalang bio, approved for safety and use in human and evaluated these patients for 120 days.

Results:

Table 1.

Effects of Herbal concentrate on Postprandial test on the 1st day and 120th day of the same patients

Group Post Prandial 2 hr Blood Glucose	Hb1c %	Number	1st rd day	120 th day	P-Value
	Mean ± SD	Mean ± SD			
Group-1 (140–200 mg/dl)	5.5–8.5	60	158.0 ± 10.0	130.2 ± 8.8	0.001
Group-2 (201–300 mg/dl)	8.6–12	50	266.0 ± 12.53	173.2 ± 13.05	0.001
Group-3 (>300 mg/dl)	>12	40	256.9 ± 28.23	227.9 ± 30.89	0.005

Conclusion: Herbal concentrate of 11 herbs results in our study significant reduction in mild to moderate type 2 diabetes to prediabetes condition and prediabetes seems to reverse in this study, but those who have uncontrolled blood sugar of >300 mg/dl have modest reduction.

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Why has not inhalable insulin been adhered in Brazil?

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Background: For the treatment of DM, some cases require the use of insulin, which is typically self-administered by subcutaneous injection or insulin infusion pump. Since the creation of the first insulin, there have been several advances, such as the production of insulin pens with ultra-thin disposable needles, aimed at making application easier. Several inhalation devices have been developed to deliver insulin. The performance of these devices is linked to the release mechanism, regulation of insulin administration and droplet size. In 2014, the FDA approved Afrezza®, which is produced by MannKind and uses a dry powder inhaler and Technosphere Insulin (TI). Afrezza® was approved by the National Health Surveillance Agency (ANVISA) in 2019, but in 2022 Afrezza® had its commercialization temporarily discontinued in Brazil.

Aim: (1) To identifying factors that might impact adherence of patients with diabetes mellitus type 1 (DM1) and type 2 (DM2) to treatment using an inhaled insulin device; (2) To assess the patients experience of using inhaled insulin; and (3) To evaluate the use of the technology to identify ways to improve product adherence.

Method: An online survey of patients with DM1 and DM2 using an inhaled insulin device in the state of Sergipe, Brazil.

Results: Among those who completed the survey, 44.3% reported not feeling any reaction or discomfort when using inhaled insulin; however, 27.3% described having at least one reaction when using the device, with the most cited symptom being coughing episodes (45.8). In addition, only a minority (38.6%) of the participants said they always felt comfortable using the inhaled insulin device in public.

Conclusion: Although the inhaled insulin device is a promising technology for the treatment of diabetes, and is capable of significantly improving the quality of life of people living with the condition, it still has some limitations in respect of adherence to treatment to be effective.

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Association of RAGE gene polymorphism with Type 2 diabetes mellitus and renal function in the Mexican population

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Background: Type 2 diabetes (T2D) is a complex polygenic and multifactorial disease with a high worldwide prevalence, characterized by defects in insulin action and secretion that result in the metabolic disorders responsible for the condition. Several candidate genes have been associated with the risk of developing T2D and its complications in different populations, including a single nucleotide polymorphism in the AGER, which encodes the expression of the receptor for advanced glycation end-products (RAGE). [1–3]

Aim: To assess the association of –374T/A polymorphism of RAGE gene promoter with T2D and renal function in the population from Norwest Mexico.

Method: The RAGE gene polymorphisms –374T/A genotype were determined in 223 Mexican subjects with T2D (n = 111) and a healthy control group (n = 112). Genotyping of the RAGE –374T/A gene polymorphism was performed by real-time PCR.