Metadichol® and Type 2 Diabetes Case Report

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Abstract

Background
Metadichol (1,2) is a Nano emulsion of long-chain alcohols called policosanols which are found in many foods like rice, wheat, grapes, sugar cane, apple and many others (3). It acts on membrane receptors in cells throughout the body to stimulate the immune system and inhibit a variety of disease processes, including those that result in metabolic diseases such as diabetes, obesity and hypertension.

Methods
A 38-year-old male of middle eastern origin was diagnosed as diabetic after complaining of tiredness and bouts of hunger. He was not on any medication and chose to be treated with Metadichol @ 10 mg per day.

Findings
Metadichol helped to lower his fasting blood sugar level from 300 mg/dl to normal in 6 weeks. His HBA1C was reduced from 9.8% to 6.2% in 12 weeks. After 32 more months, his diabetic indicators remain normal.

Interpretation
Metadichol is safe and effective in controlling blood sugar and HbA1C levels in humans. Metadichol has been shown to bind to the vitamin D receptor (2) as an inverse agonist. However, it acts more like a protean agonist ligand (4) to increase or decrease activity depending on the system. Since Metadichol has no known negative side effects and consists of natural components of common foods, Metadichol has the potential to serve as a novel treatment for type 2 diabetes.

Key words: Diabetes. HBA1C, Vitamin D, VDR
Introduction

Globally, it is estimated that 366 million people had diabetes in 2011 (5). The number of people with type 2 diabetes is rapidly increasing in every country and in some low to middle income countries, up to 80% of people have diabetes. India and China are the most affected countries. Diabetes caused 4.6 million deaths in 2011. By the year 2030, it is estimated that 439 million people will have type 2 diabetes.

Type 2 diabetes is a metabolic disease that can be prevented through lifestyle modification, diet control, and control of overweight and obesity. Education of the populace is still the key to control this emerging epidemic. Novel drugs are being developed but despite new insight into the pathophysiology of the disease, no cure is available in sight. We had previously shown the efficacy of Metadichol in reversing type 1 diabetes (6). The patient continues to produce insulin 5 years after he stopped using Metadichol. In this case report, we show Metadichol’s potential use on patients with Type 2 diabetes.

Case Report

A 38 years old man complained of tiredness and bouts of hunger at his annual checkup. A routine blood test revealed that he had high fasting glucose level of 300 mg/dl. The patient decided against using prescription drugs and opted to use Metadichol® at 5 mg twice a day. His glucose level was measured and monitored regularly throughout the first 12 weeks (Figures 1-8). There was rapid improvement in his condition and by Week 6, his blood glucose levels were under control. By Week 12, his HbA1C (Figure 7) had dropped from 9.8% to 6.2%. His tiredness was abated within 2 weeks of starting the regimen. His blood was very thick and dark when he first started using Metadichol but by the end of Week 6, his blood color was lighter and the blood flow was normal. He continued to use Metadichol at 5 mg per day and a year later, his glucose and HbA1C remained normal.

Discussion

Metadichol is a Nano emulsion of long-chain lipid alcohols (C-26, C-28 and C-30), which are commonly known as Policosanols. Metabolism studies in fibroblasts suggest that very long chain fatty alcohols, fatty aldehydes, and fatty acids are reversibly interconverted in a fatty alcohol cycle (7,8). Since the metabolites of long chain alcohols are inter converted, a single dosage even at low doses can theoretically have lasting effects. Metadichol has a particle size of less than 60 nm. We have shown that it binds to the vitamin D receptor (VDR) as an inverse agonist (2). It is the only known inverse agonist of VDR known in medical literature. Calcitriol (1,25-Dihydroxy Vitamin D) is the natural ligand for the VDR and acts as an agonist. Protean agonists act as both positive and negative agonists on the same receptor, depending on the degree of constitutive activity that is present. If there is no constitutive activity, the agonist would be a positive agonist. When
constitutive activity is present, the Protean agonist would be an inverse agonist (9). Metadichol can also act both ways, increasing insulin secretion (8) and reducing insulin in hyperinsulinemia (2). Therefore, it behaves more like a Protean agonist.

Vitamin D is essential to the skeletal system (10) and recent evidence suggests that it also plays a major role in regulating the immune system, perhaps through the involvement in immune responses to diseases (11). The mechanism of action of vitamin D in type 2 diabetes is thought to be mediated not only through regulation of plasma calcium levels, which regulate insulin synthesis and secretion, but also through a direct action on pancreatic beta-cell function. Therefore, owing to its increasing relevance, this review focuses on the role of vitamin D in the pathogenesis of type 2 diabetes mellitus (12). Metadichol also shares cross-reactivity with other nuclear receptors (13). This may explain its activity against a wide range of diseases.

Conclusion
Metadichol is a product made from agricultural waste and is a renewable resource. It has the potential to serve as an antiviral molecule with a broad spectrum of activity, particularly given that its constituents (long-chain lipid alcohols) are present in foods commonly consumed on a daily basis and that it has demonstrated no toxicity at doses of up to 5000 mg/kg (14,15). Metadichol may also serve as a preventive agent for many tropical diseases given that it strengthens innate immunity through VDR binding. This could represent a first key step in preventing diseases. Metadichol is ready for large scale testing in countries that are ravaged by diabetes such as India and China. Once proven on large populations, Metadichol could be used as a preventive nutritional supplement and a cheaper but more effective substitute for prescription drugs that have been largely ineffective and have many adverse side effects that add to higher healthcare costs.

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REFERENCES


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Figures

Figure 1: Daily Fasting Glucose level before breakfast
Figure 2: Glucose level 1 hour after breakfast
Figure 3: Glucose level before lunch
Figure 4: Glucose level 2 hours after lunch
Figure 5: Glucose level before dinner
Figure 6: Glucose level 2 hours after dinner
Figure 7: HbA1C levels at baseline and at day 84
Figure 8: Glucose level comparison at baseline, average first 41 days and average days 42-84

Note: Glucose units are mg/dl
Figure 1: Daily Fasting Glucose level before breakfast

Figure 2: Glucose level 2 hours after breakfast

Figure 3: Glucose level before lunch
Figure 4: Glucose level 2 hours after lunch

Figure 5: Glucose level before dinner

Figure 6: Glucose level 2 hours after dinner
Figure 7: HbA1C levels at baseline and at day 84

Figure 8: Glucose level comparison at baseline, average first 41 days and average days 42-84
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