

Formulation and Evaluation of Polyherbal antidiabetes Tea Powder

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ABSTRACT :

The present study on the treatment on the diabetes mellitus . In last few years there has been an extraordinary growth in the herbal medicine. The different Extract of different parts of plants showed promising pharmacological activity. The major part of this study was made to formulate herbal antidiabetic tea powder Contain insulin leaf , moringaoleifera leaf, and Liquorice powder. It's well known that this herbs show Antidiabetic , antimicrobial and antibacterial properties.

Type 1 and type 2 are different types of the diabetic mellitus we can use this herbal antidiabetic tea powder for all this type of the diabetic mellitus Moringaoleifera, native to India, grows in the tropical and subtropical regions of the world. It is commonly known as 'drumstick tree'. The leaves are rich in minerals, vitamins and other essential phytochemicals. It is used as potential antioxidant, antidiabetic agent. Licorice (Licorice) has been known as a widely investigated medicinal plant in Iran . Medicinal and flavoring properties of licorice have resulted in the widespread use of Licorice in the pharmaceutical and food industry

I. INTRODUCTION :

costus belongs to the family Costaceae, commonly known as insulin plant in India because its leaves help to build up insulin in the human body Insulin plant is one such traditional plant which is getting global acceptance nowadays and is now widely used as an ayurvedic medicinal herb. Consumption of the leaves are believed to lower blood glucose levels, and diabetics who consumed the leaves of this plant said to have a fall in their blood glucose levels. Insulin plant is native to Southeast Asia, In the Ayurvedic system of medicine, diabetes is traditionally treated by chewing the plant leaves for a period of one month to get a controlled.

Diabetes mellitus is a metabolic disease, involving inappropriately elevated blood glucose levels.

Diabetes mellitus is a complex chronic illness associated with a state of high blood glucose level, or hyperglycemia, occurring from deficiencies in insulin secretion, action, or both Diabetes is caused by deficiency of insulin secretion damage of pancreatic β cell or insulin resistance related to non-use of insulin. Inclination to sedentary lifestyle may be the major reason for the continual rise in the number of diabetic patients

Moringaoleifera is a multipurpose and exception all nutritious plant. Its leaves are extremely valuable source of nutrition for people of all ages. M.oleifera is one of the promising plants which could contribute to increase some of essential nutrients and health promising phytochemicals.

Moringaoleifera is grown for its nutritious pods, edible leaves and can be utilized as food, medicine, cosmetic oil or forage for livestock. Its height ranges from 5 to 10 m. Several studies have demonstrated the beneficial effects in humans. MoringaOleifera has been recognized as containing a great number of bioactive compounds. The most used parts of the plant are the leaves, which are rich in vitamins, carotenoids, polyphenols, phenolic acids, flavonoids, alkaloids, glucosinolates, isothiocyanates, tannins and saponins. The high number of bioactive compounds might explain the pharmacological properties of M.Oleifera leaves. Many studies, in vitro and in vivo, have confirmed these pharmacological properties. The leaves of MO are mostly used for medicinal purposes as well as for human nutrition, since they are rich in antioxidants and other nutrients, which are commonly deficient in people living in undeveloped countries. MO leaves have been used for the treatment of various diseases from malaria and typhoid fever to hypertension and diabetes.

Diabetes mellitus :

Diabetes mellitus is taken from the Greek word diabetes, meaning siphon - to pass through and the Latin word mellitus meaning sweet.

Diabetes mellitus is a metabolic disease, involving inappropriately elevated blood glucose levels. DM has several categories, including type 1, type 2. The main subtypes of DM are Type 1 diabetes mellitus and Type 2 diabetes mellitus which classically result from Type 1 Diabetes Mellitus defective insulin secretion and action presents in children or adolescents, while Type 2 Diabetes mellitus is thought to affect middle-aged and older adults who have prolonged hyperglycemia due to poor lifestyle

Diabetes mellitus is commonest endocrine disorder that affects more than 100 million people worldwide (6% population). It is caused by deficiency or ineffective production of insulin by pancreas which results in increase or decrease in concentrations of glucose in the blood. It is found to damage many of body systems particularly blood vessels, eyes, kidney, heart and nerves. Diabetes mellitus has been classified into two types i.e. insulin dependent diabetes mellitus Type I and non-insulin dependent diabetes mellitus Type II.

Types of Diabetes mellitus :

- Type 1 diabetes
- Type 2 diabetes

Type 1 : Insulin dependent diabetes mellitus

It is also called as juvenile-onset diabetes, because it often begins in childhood. Type 1 diabetes is thought to be caused by an autoimmune reaction. This means your immune system attacks and destroys the beta cells in your pancreas that produce insulin.

Type 1 diabetes can be diagnosed at any age, and symptoms often develop quickly. If you have type 1 diabetes, you'll need to take insulin every day to survive. It could also happen because

of problems with cells in your pancreas that make insulin.

Type 2: Non-insulin dependent diabetes mellitus

Type 2 diabetes starts out as insulin resistance. This means your body cannot use insulin efficiently, which causes your pancreas to produce more insulin until it cannot keep up with demand. Insulin production then decreases, which causes high blood sugar.

Sign and symptoms :

The symptoms of diabetes mellitus will depends on the type, but the common symptoms include the following

- Frequent urination.
- Excessive thirst.
- Extreme hunger.
- Weakness
- Blurry vision.
- Weight loss

Some common Causes of diabetes:

- ✦ Overweight
- ✦ obesity
- ✦ physical inactivity
- ✦ eating unhealthy food
- ✦ physical and mental stress
- ✦ genetic predisposition

Materials and method :

- **Insulin**
- **Moringaoleifera**
- **Liquorice**

Formulation table :

Sr.No	Ingredient	Quantity
1.	Insulin leaf	20 gm
2.	Moringaoleifera	10 gm
3.	Liquorice	5 gm

Evaluation parameters :

- Standardization of powder
- Moisture Content (Loss on Drying)
- Angle of repose

- Bulk Density and Tapped Density:
- Carr's Index:

II. RESULT :

The organoleptic properties of insulin and moringaoleifera shows the green colour, odour was characteristic , and the tea powder of insulin leaves , moringaoleifera was evaluated at different parameters as the tea powder contains effective

amount of protein , iron and number of antidiabetic components such as B-Carotene .

B- Carotene enhances the glucose utilization in liver cell line. Research suggests that a potent antidiabetic substance enhance glucose utilization in the liver to decrease the high blood glucose level in our body.

Parameter	Results
Colour	Green
Odour	Characteristic
PH	6.5
Bulk density	0.36 g/cm

III. CONCLUSION

The prepare formulation beneficial for the all the persons.the formulation is prepare from the natural herbs so the chances of side effects are lower.The research works that have been done yet showed that Costusigneus is an important medicinal herb presented with various pharmacological actions. The studies have done on this plant proved that it possesses many important phytoconstituents such as conjugated flavonoids, catechin derivative And these compounds found to be responsible for various pharmacological properties such as antidiabetic effect , antimicrobial activity, antiinflammatory potential, antioxidant activity, neuroprotective Role, hypolipidemic activity etc. the formulated herbal antidiabetic tea powder has been good scope in future in nature remedies research.

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