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A REVIEW ON ROLE OF MURRAYA KOENIGII (CURRY LEAF) IN (DIABETES MELLITUS - TYPE II) PRAMEHA

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ABSTRACT

Diabetes is a problem of body with increase blood glucose level to rise higher than normal called as hyperglycemia. Type- 2 diabetes is most common form of diabetes with a treatment of pills, insulin and lifestyle changes. Management of diabetes type-2 without side effect is a challenge for medical community. Traditional medicine derived from medicinal plant are used by 60 % of world's population. This reviews focuses on use of murrayakoenigii (Curry leaves) in the treatment of diabetes. Curry leaves has been reported for its antidiabetic, antioxidant property

INTRODUCTION

Diabetes viewed from an ayurvedic prespective

In India diabetes has been known since vedic period. Acharya Charka has recognized and describe in Charksamhita as a sweet tasting substance found in urine in Vedic period term used as – 'Prameha' which means excessive urination another term that describe diabetes is 'madhumeha; or flow of sugar from urine.

Diabetes viewed from western perspective

Diabetes is a chronic complex metabolic disorder resulting from insulin insufficiency or insulin dysfunction. The WHO predicts that diabetes will be 7th primary cause of death in 2030(1)

There are three types of diabetes

Type-1 About 5% of patient having type I diabetes which is consequence of an autoimmune mediated destruchion of Bcell leading to insulin deficiency.

Type-II Diabetes type II affects about 95% patients. Patients mostly acquire this condition genetically from patients or another blood relative and is charcterised by insulin resistance rather than absolute insulin deficiency.

Type 2 Diabetes can be manifested due to resistance of peripheral receptor to insulin or increased endogeneous glucose production by liver and clinically charcterised by hyperglycemia.

Type 3- Is of gestational type which develop during pregnancy and mostly disappear after delivery. Treatment for type -2 diabetes use several drugs such as bigunides, sulfonylurea and thiazolidinediones to reduce hyperglycemia. Use of these drugs are restricted by their pharmacokinetic properties and secondary side effects. So Searching of new compound is essential to overcome problems.

Use of murrayakoenigii

Murrayakoenigiia tropical and subtropical aromatic plant with whitefragrant flower. It has been reporte as anti-diabetic, antioxidant hepatoprotective.

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Nutrients	Value of fresh curry leaves (100gm)	Value of dehydrated curry leaves (100gm)
protein	6g	12g
fat	1g	5.4g
carbohydrate	18.7g	64.3g
calcium	830mg	2040mg
iron	0.93mg	12g
B-carotene	7560microg	5292microg

Role of curry leaf in glucose metabolisam

Curry leaves have been found to reduce blood sugar in diabetic rats in a study published in March 2007 in the "journal of ethnopharmacology". Curry leaves have some phytochemical that inhibit enzyme alpha amylase present in human pancreas. This enzyme break down starch in small intestine and its inhibition can help to control blood sugar level in patients with type 2 diabetes. According to clinical study published in journal 'plant food for Human Nutrition'. can reduce fasting and post prandial blood sugar level if taken in a dose of about 12gm /day for a month.

Carbohydrate metabolism

Curry leaves may treat diabetes by influencing carbohydrate metabolism – Diabetic rat fed curry leaves for 30 days displayed sign of improved liver and kidney function. According to finding of a study published in 2007 in the "International Journal of biological chemistry" specifically curry leaves restored liver and kidney enzyme responsible for breaking down carbohydrate back to their normal level also help to reduce cholesterol level.

Oxidative stress

Diabetes leaves a person of a greater risk for oxidative stress as a result of decreased antioxidant level. Oxidative stress is the damage caused to cells by free radicals, which are produced as a result of cellular metabolism, Antioxidant bind to these free radicals and render them powerless in their attack on cells. Curry leaves were found to reduce cell deaths in pancreatic cell in the 2007 study in "Chemico – Biological Interaction" This is important as pancreatic cell produce insulin are therefore involve with diabetes.

Minerals

Curry leaves are with rich in many minerals and trace minerals such as iron, zinc, copper. Therefore researches recommended in a study published in January 2007 in chemico – biological Interaction' that people with diabetes may benefit from the addition of curry leaves in diet.

These minerals found in curry leaf extract are important for maintain normoglycemia i.e. – normal sugar level This is done by activation of pancreatic B – cell which are responsible for creation of insulin.

DISCUSSION

Diabetes is viewed in connection with all the factors that affect a patients well being such as life style , nutrition exercise , relaxation etc biggest health benefit of curry leaves that they can be used to control diabetes.

Conclusion

As per all above information studies prove that curry leaves with their vast herbal properties, Several medicinal properties – such as anti – diabetes , antioxidant , hepato protective , various vit – like nicotinic acid , Vitamin-C, Vitamin – A and carbazole alkaloids. Thus fully grown carry leaves – one beneficial controlling diabetes and also prevent diabetes due to hereditary factor. It is beneficial in weight loss and also cure diabetes due to obesity.

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