



Review of efficacy of *Guduchi Kwath* in diabetes mellitus

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Abstract:

Diabetes mellitus is a metabolic disorder of carbohydrate, fat, & protein characterized by hyperglycemia with or without *glycosuria*. Diabetes Mellitus is the leading cause of the end stage renal failure, major cause of Non traumatic amputations, responsible for 30% of preventable diabetic blindness and leading cause of cardiovascular mortality. Diabetes mellitus is a chronic condition so it has to be controlled by means of long term consumption of medicine, with no adverse effect. The option that should be selected must be economical, easily available, can be administered easily and can be practiced for long duration. Thus *Ayurvedic* drugs are preferable. This article reviews about the efficacy of *Guduchi kwath* in Diabetes mellitus with oral hypoglycemic drugs.

Keyword: Diabetes mellitus, insulin, guduchi kwath.

Introduction:

The present era is full of stress and strain due to lifestyle modifications, changes in dietary habits, urbanization and industrialization. This has lead in upsurge of many diseases and one of them is Diabetes mellitus. Diabetes mellitus is one of the leading causes of morbidity and mortality. The top three countries for number of persons with diabetes are India, China and United States of America. Out of total diabetic population 1/3rd belongs to India. So India has been declared as "Capital of diabetes".

The herbal or mineral remedies stated in *Ayurveda* used singly or in combination have potency in the treatment of Diabetes mellitus. *Guduchi* is one of the medicinal plant which is *Tikta, Kashaya rasatmaka, Madhur vipak, ushna virya* and *guru, snigdha, tridoshghna guna* which is exactly opposite to patho-physiological

factors of Diabetes mellitus. As well drug is easily available, cost effective, and has no adverse effects noted so far.

Keyword:

Aim and objective: To study the effect of *Guduchi kwath* in Diabetes mellitus.

Material: Literature review from *Samhita*, Journals, Websites

Methods: Conceptual study.

Result:

What is Diabetes?

The word Diabetes is originated from French word named "*Jiyabatis*" which means punctured pitcher. Diabetes mellitus is a group of metabolic disease characterized by hyperglycemia resulting from defects in insulin secretion, insulin action or both. The chronic hyperglycemia of diabetes is associated with long term damage, dysfunction and failure of various organs, especially the eyes, kidneys, nerves, heart and blood vessels.

Pathogenesis:

The development of morbid condition of disease, Diabetes may be primary or secondary according to etiology but whatever is the etiology, the hyperglycemia results in every case of diabetes due to the deficiency of insulin. The deficiency of insulin is absolute in Type I and relative in Type II. Increased gluconeogenesis and lipolysis follows as compensatory reaction under the influence of such hormones as growth hormone,

glucagon and adrenocortical hormones, in what is basically a situation of glucose lack. Thus the hyperglycemia characteristic of diabetes arises from two main sources, namely a reduced rate of removal of glucose from the blood by the peripheral tissue and an increased rate of release of glucose from the liver into the circulation. To know the pathogenesis more precisely it is necessary to understand it separately for type I and type II diabetes.

Environmental Factors:

The migration of population to more urban settings, as well as increasing affluence in some countries contributes for the establishment of diabetes. Foods highly rich in carbohydrate and fat, sedentary lifestyle, stress and strain are triggering factors for type 2 DM. Other major environmental factors precipitating type 2 diabetes include trauma, major illness and drugs such as, *thiazide* and oral contraceptives.

CLINICAL FEATURES OF DIABETES

The classic symptoms of diabetes are as follows:

- Polyuria
- Polydipsia
- Unexplained Weight loss

These are sometimes associated with polyphagia and blurred vision. Pruritus

vulvae or balanitis is a common presenting symptom since the external genitalia are especially prone to infection by fungi which flourished on skin & mucous membranes contaminated by glucose.

DRUG REVIEW

ज्ञेया गुडूची गुरुउष्णवीर्या तिक्ता कषाया ज्वरनाशिनी च।

दाहार्तितृष्णावमिरक्तवातप्रमेहपाण्डुभ्रमहारिणी च।

रा.नि.

अमृताया रसः क्षौद्रयुक्तं सर्वप्रमेहजित ।

शा.म. ६/७

मधुनाऽमरास्वरस इव सर्वान्मेहान्निवारयति ।

भै.र.प्र.चि. ३७/८

*Guduchi Gana: Vayasthapan,
Dahaprashaman, Trushnanigrahan,
Stanyashodhan, Truptighana, (Charak)*

Chemical composition:

Giloin, Giloinin, Gilosterol, Erberinie.

Properties- *Rasa- Tikta, Kashaya*

Virya- Ushna

Vipaka- Madhura

Guna- Guru, Snigdha

Prabhav- Vishaghna

Doshakarma: *Tridoshashamak.*

Prayojya anga: *mula and Kand (root and stem)*

Discussion:

Looking at the clinical features and pathology *madhumeha* can be correlated

with the Diabetes mellitus type 2 mentioned in modern medical science. Diabetes mellitus is a serious global health problem that significantly affects a person's quality and longevity of life. *guduchi* is *Tikta Kashaya rasatmaka*, mainly *Madhura vipaka*, *Ushna veerya*, *guru*, *snigdha guna* with *Tridoshashamak, deepan, pachan*. so if we concentrate on pathology of *madhumeha* these properties acts against the properties of *dushta* and *dravaguna kapaha* and also *dushya vata* causing *prakopa* so step of basic pathology can stop.

Due to their *ushna veerya* and *deepan pachan gunas*, *dhatvagnimandhya* due to *dushta kledaka kapha* can get back to normal *agni'* s function. So there is normally forming of *ahara rasa* with normally *dhatu poshana*. Ultimately causes next functions normally with avoiding *kledavridhhi*. As it is *rasayana* it helps to recover the *dhatukshaya* and *ojakshaya*.

The antidiabetic activity of *guduchi* is may be due to increased entry of glucose into peripheral tissue and organ like liver. *Guduchi* increase the activity of glycogen synthetase in the liver, it may increase the storage of glucose in hepatocyte. It also decrease the activity of phosphorylase in the liver, thereby it prevents the release of glucose into the blood.

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Conflict of Interest: Non

Source of funding: Nil

Cite this article:

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Ayurlog: National Journal of Research in Ayurved Science- 2020; (8) (4):01- 04