Role of homoeopathic drugs as anti diabetic agents

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Abstract
Diabetes Mellitus cases are increasing day to day life throughout the global. It is major medical problem in developing and developed countries in all over world. According to World Health Organization is deficiency of insulin secretion, inadequacy insulin secretion from beta cells of pancreas. In order to manage conservative line of treatment with anti diabetes drugs has been developed, but each medicine has their own side effects. So, natural way with Homoeopathic medicines can be effetely post pone diabetic and its complications. In India, certain herbal medicines like Syzygium cumini, Cephalandra Indica, Abroma Augusta, Gymnema Sylvestre and Momordica Charantia, merc, taren, acids and repertory medicines can be manage diabetic mellitus. The present review focused that Homoeopathic Medicines are used in Research with scientific evidences.

Keywords: Homoeopathic medicines, diabetes mellitus

Introduction
Diabetes mellitus refers to a group of common metabolic disorders that share the phenotype of hyperglycaemia. Several distinct types of diabetes mellitus are caused by a complex interaction of genetics and environmental factors depending on the etiology of diabetes mellitus. Factors contributing to the hyperglycaemia include reduced insulin secretion, decreased glucose utilization and increased glucose production. The metabolic dysregulation associated with diabetes mellitus causes secondary pathophysiologic changes in multiple organ systems that impose a tremendous burden on the individual with diabetes and on the health care system. In the United States, diabetes mellitus is the leading cause of end stage renal disease, non traumatic lower extremity amputations and adult blindness. It also predisposes to cardiovascular diseases. With an increasing incidence worldwide diabetes mellitus will be the leading cause of morbidity and mortality for the for seeable future [1].

Classification
Diabetes mellitus classified on the basis of the pathogenic process that leads to hyperglycaemia, as opposed to earlier criteria such as onset or type of therapy. The two broad categories of diabetes mellitus are designated type 1 and type 2. Both types of diabetes are preceded by a phase of abnormal glucose homeostasis as the pathogenic processes progress. Type 1 diabetes mellitus is the result of complete or near total insulin deficiency. Type 2 diabetes mellitus is a heterogenous group of disorders characterized by variable degrees of insulin resistance, impaired insulin secretion and increased glucose production. Distinct genetic and metabolic defects in insulin action and secretion give rise to the common phenotype of hyperglycaemia in type 2 diabetes mellitus and have important potential therapeutic implications now that pharmacologic agents are available to target specific metabolic derangements. Type 2 diabetes mellitus is preceded by a period of abnormal glucose homoeostasis classified as impaired fasting glucose or impaired glucose tolerance [2].

Two features of the current classification of diabetes mellitus diverge from previous classifications. First, the terms insulin dependent diabetes mellitus [IDDM] and non-insulin dependent diabetes mellitus [NIDDM] are obsolete. Since many individuals with type 2 diabetes mellitus eventually require insulin treatment for control of glycaemia. The use of the term NIDDM generally considerable confusion. A second difference is that age is not a criterion in the classification system. Although type 2 diabetes mellitus most commonly develops before the 30, an auto immune beta cell destructive process can develop at any age. It is estimated that between 5 and 10 % individuals who develop diabetes mellitus after age of 30 years have type 1 diabetes mellitus. Although type 2 diabetes mellitus more typically develops with increasing age,
it is now being diagnosed more frequently in children and young adults, particularly in obese adolescents.

Other types of diabetes mellitus

Other etiologies for diabetes mellitus include specific genetic defects in insulin secretion or action, metabolic abnormalities that impair insulin secretion, mitochondrial abnormalities and a host of conditions that impair glucose tolerance. Maturity onset diabetes of the young [Mody] is a subtype of diabetes mellitus characterized by autosomal dominant inheritance, early onset hyperglycaemia [usually < 25 years] and impairment in insulin secretion. Mutations in the insulin receptor cause a group of rare disorders characterized by severe insulin resistance.

Diabetes mellitus can result from pancreatic exocrine disease when the majority of pancreatic islets are destroyed. Cystic fibrosis related diabetes mellitus is an important consideration in the patient population. Hormones that antagonize insulin action can also lead to diabetes mellitus. Thus diabetes mellitus is often a feature of endocrinopathies such as acromegaly and coashing’s disease. Viral infections have been implicated in pancreatic islet destruction but are an extremely rare cause of diabetes mellitus. a form of cute onset of type 1 diabetes mellitus, termed fulminant diabetes, has been noted in Japan and may be related to viral infection of islets.

Diabetes is a major cause of mortality, but several studies indicate that diabetes is likely underreported as a cause of death. In the United States, diabetes was listed as the seventh leading cause of death in 2007, a recent estimate suggested that diabetes was the fifth leading cause of death worldwide and was responsible for the almost 4 million deaths in 2010.

Type 2 diabetes mellitus is characterized by impaired insulin secretion, insulin resistance, excessive hepatic glucose production and abnormal fat metabolism. Obesity, particularly visceral or central [as evidenced by the hip-waist ratio], is very common in type 2 diabetes mellitus [80% or more are obese]. In the early stages of the disorder, glucose tolerance remains near normal, despite insulin resistance, because the pancreatic beta cell compensate by increasing insulin output. As insulin resistance and compensatory hyperinsulinaemia progress, the pancreatic islets in certain individuals are unable to sustain the hyperinsulinemic state. IGT, characterized by elevations in postprandial glucose, then develops. A further decline in insulin secretion and an increase in hepatic glucose production lead to overt diabetes with fasting hyperglycemia. Ultimately, beta cell failure occurs.

Type 2 diabetes mellitus present with polyuria and polydipsia, but unlike type1 diabetes, patients are often older [over 40 years] and frequently obese. However, with the increase in obesity and sedentary life style in our society, type 2 diabetes is now seen in children and adolescent with increasing frequency. In some medical attention is sought because of unexplained weakness or weight loss. Most frequently, however, the diagnosis s made after routine blood or urine testing in asymptomatic persons. The infrequency of ketoacidosis and milder presentation in type 2 diabetes is presumably because of higher portal vein insulin levels in these patients than in type 1 diabetics, which prevents unrestricted hepatic fatty acid oxidation and keeps the formation of ketone bodies in check. In the decompensated state, these patients may develop hyperosmolar nonketotic coma due to severe dehydration resulting from sustained osmotic diuresis [particularly in patients who do not drink enough water to compensate for urinary losses from chronic hyperglycaemia].

Typically, the patient is an elderly diabetic who is disabled by stroke or an infection and is unable to maintain adequate water intake. Furthermore, the absence of ketoacidosis and it’s symptoms [nausea, vomiting, respiratory difficulties] delays the seeking of medical attention until severe dehydration and coma occur.

Syzygium Cumini

India has a very long History of using herbal drugs as the main course therapy for treating a number of Diseases. Herbal drugs therapy is regarded as an important for the treatment of a wide range of disease. However envious improvements have been observed in modern system, but India herbal plant provide a rich source for health care to present different pathological status. Syzygium belongs to family Myrtaceae and is known as a kala jamun. The World Health Organization (1980) has also recommended the evaluation of the effectiveness of plants in conditions where there is lack of safe synthetic drugs. Ancient Greeks were well known to this tree in 500 BC. According to the literature, A slow growing species, it can reach heights of up to 30 m and can live more than 100 years. Its dense foliage provides shade and is grown just for its ornamental value. At the base of the tree, the bark is rough and dark grey, becoming lighter grey and smoother higher up. The wood is water resistant. The leaves which have an aroma similar to turpentine, are pinkish when young, changing to a leathery, glossy dark green with a yellow midrib as they mature. The leaves are used as food for livestock, as they have good nutritional value. Syzygium cumini trees start flowering from March to April. The flowers are fragrant and small, about 5 mm in diameter. The fruits develop by May or June and resemble large berries; the fruit of Syzygium species is described as “drupaceous”. The fruit has a combination of sweet, mildly sour and astrignent flavour and tends to colour the tongue purple.

Momordica Charantia

Momordica charantia known as palisota reichb. Palisota Reichb commonly known as bitter melon, bitter gourd or gourd, was originated from India and carried to China in the 14th century. It is a tropical and subtropical vine of the family Cucurbitaceae, widely grown in Asia, Africa, and the Caribbean. The fruit juice and/or a leaf tea are employed for diabetes, malaria, colic, sores and wounds, infections, measles, hepatitis, and fevers. Leaves are used for treating catarrh, constipation, dermatitis, diabetes, diarrhea, eczema, fever, leprosy, malaria, rheumatism, breast cancer, snake bite, anaemia, dysentery, gonorrhoea, measles, rheumatoid arthritis. Bitter melon has been shown to increase the number of beta cells in the pancreas thereby improving the body’s ability to produce insulin.

Cephalandra Indica

Indian systems of traditional medicines namely Homoeopathy, Ayurvedia and Unani nearly about 200 plant species for treatment of various diseases from ancient times. About sixty thousand plant species were used for medicinal purpose worldwide. The World Health Organization (WHO) estimated near about 80% of world population both in
developing and developed countries use herbal drugs for various ailments. This plant is one of the tremendous plants of Homoeopathy system and Ayurveda. Which is commonly known as kundru. Cephalandra Indica widely used in homoeopathy as a mother tincture for type 2 diabetes mellitus.[6]

**Abroma Augusta**
This plant widely used in Homoeopathy System of Medicine as Mother Tincture for indication of diabetes mellitus. It was first proven by Dr. D.N. Ray. This plant family sterculiaeae commonly known as ulatkambal and devils cotton. Abroma Augusta is small tree with velvety branches. It is located in Africa, Asia and Australia. In India mainly in Meghalaya, Assam, Kerala, Arunachal Pradesh, Tripura. This plant 4 m height and reach up to 8 m. Stems yield a fibre. This plant flowering around from June to November. Plant leaves used for diabetes as well as female complaints also.[7].

This plant clinical indicated for albuminuria, sleeplessness, amenorrhoea, carbuncle, debility, dysmenorrhoea and weakness of brain. Mind is irritated, excitible mood, forgetfulness, depression, morose, anxious, unable to moody. Head is empty feeling, rolling of the head and vertigo, heaviness and discomfort, much giddiness, weakness of vision, puffiness of the lids, heaviness, eyes easily tired, inclination to drop eyes closed, pain and watering of the eyes, sneezing several times, nose watering and dryness with desire to rub, face pale, yellow, wrinkled, old looking, itching eruption on the face with burning sensation, furuncles of the face, dry, burring throat, painful, difficulty in swallowing solids but drinking relieves throat symptom temporarily. Stomach hungry feeling with faint feeling, desire for all kinds of foods, a feeling of emptiness in the stomach.

**Gymnema Sylvestre**
This plant belongs to asclepiadaceae. Gymnema Sylvestre slow growing, medical plant in peninsular and central in India. It is more in Australia, Africa and India. In India more in Kerala, Andhra Pradesh, Tripura and Arunachal Pradesh. This plant consists of anthraquinones, flavones, hentri acontane, pentatriacontane, alfa and beta acetic acid, lupeol, beta amyrin.[8]

**Rhus Aromatica**
Fragrant sumac is a woody plant that can grow to around 2 to 4 m (6.6 to 13.1 ft) tall with a rounded form. It produces yellow flowers in clusters in March or April before the leaves emerge, before anthesis. Pistillate (female) plants bear hairy red drupes in July or August that can last until the next March if not eaten by birds or small mammals.

The leaves and stems of fragrant sumac have a citrus fragrance when crushed, hence the species name. Leaves resemble those of its relative poison ivy, but fragrant sumac is not poisonous. It inhabits mostly uplands areas, while poison ivy has no odour and can inhabit various habitats. The leaves are alternate and trifoliate with the middle leaflet being the largest of the three. It develops a good autumn colour like other sumacs of bright yellow to red to red purple. Some are grown by large, diverse nurseries or by native-plant nurseries and are infrequently planted in landscapes in the Midwest and East. It grows in full deep shade to full sun and well-drained soils slightly acid to well alkaline with a pH range of about 6.0 to 8.5. It has a shallow, fibrous root system and is easily transplanted. Some of its branches can trail upon the ground and root and it can ground sucker to form a colony, depending on the site.[9]

While this species is not really well known and used often by landscapers and homeowners, the cultivar 'Gro-low' is commonly planted as a high groundcover, and some are sold at most any nursery or garden center. However, buying this plant is done mostly by landscape architects and designers, (or by customers influenced by nursery personnel recommending it), who know the plant, while most homeowners do not know it and look instead for bushes or groundcovers with pretty flowers or evergreen foliage. Low-Gro' sumac grows about 2 ft high and easily spreads 6 to 8 ft around, developing good autumn colour.[10]

**Repertory**
Diabetes: Sugar: Aceta ac, adren, am acet, arg m, arg n, aristol, arn, ars bro, ars iod, ars, asciep, vinc, asr, a mur, bell, bor ac, bov, bre, caps, carb ac, ceanoth, cham, chel, chimaph, chionanth, cola, cola, colch, crot, cup rurs, cur, cup purp, furr iod, furr mur, flor ac, glon, glycerine, grind, helleb, helon, iod, iris, kali br, kreos, lach, lecith, lyc, lyssin, morph, mosch, murex, nat m, nat s, nit ac, op, phos ac, phos, philorid, plum iod, pod, rhus, seuka, sec, sil, sizyg, strych, ars, sul, tar, tarax, tereb, uran n, urea, vanad.

Pancreatic origin: Iris, pancreat, phos.
- Diabetes with swollen ankle and acidosis (an abnormal production of acid in body and its defective elimination): with or without sugar in the urine, where there is great thirst; weakness and pallor and loss of flesh (acet ac).
- Excessive urination with sugar – arg nit.
- Diabetic, acidosis: soda bicarb and lithi.
- Diabetes mellitus with dyspepsia - ura nit.
- Diabetes gangrene-ars alb.
- Diabetes insipidus-scilla.
- If chiefly in the night – phs ac and murex.
- Diabetic itching – dolichos.
- Diabetic complication – graphites
- Diabetic complicated with albuminaria-canth
- Voracious appetite and costive bowels. Thirst, nausea, dry skin, dry tongue, urinates copiously – Lactic acid.

**Borax**
Borax is Awkwardness inclined to drop things from hands: chronic urticaria, diarrhoea before and during menses, great weakness of joints and weariness; intolerable itching at the tip of coccyx.

**Tarentula**
In tarent h is copious urine with sugar, diabetes with grief, anxiety restlessness and weakness with emaciation. Patients impulsive violent, irritable, hysterical, feigns sickness.

**MERC Sol**
MERC is intense thirst through the tongue looks moist, frequent urging to urinate, trembling of hands, excessive perspiration, quantity of urine more than the water drunk. Large flabby tongue with imprints of teeth.
Plumbum Met
is urine frequent, ineffectual tenesmus, albuminous, low specific gravity excessive and rapid emaciation, weakness, loss of memory, obstructed flatus with intense colic, paralysis of lower limbs, gastralgia, constant vomiting, chronic intestinal nephritis.

Heper Sulph
Hep s is slightest injury causes suppuration, over sensitive physically and mentally, peevish and unreasonably anxious extremely sensitive to cold air, urine voided slowly, without force drops vertically, bladder weak, stool sour, while undigested and fetid, itching of glans; menses late, scanty, profuse sweat.[11]

Phosphoric Acid
Best suited to persons of originally string constitution who have become debilitated by loss of vital fluids, sexual excess, or a long succession of moral emotions as grief, care, disappointed affection. Pale sickly complexion, eye sunken and surrounded by blue margins. Is listless apathetic indifferent to the affairs of life; prostrated and stupified with grief, to those things that used to be of most intrest, especially if there be debility and emaciation. Profuse urination at night of clear watery urine white forms a white cloud at once.

Sulphuricum Acidum
Mental excitability, irritable, restless, fretful and peevish if his work is not done. Must do everything in great hurry; nothing can be finished quickly enough. Unwilling to answers; says Yes or No with difficulty. Well indicated in diabetic induced lassitude, debility despondency, dullness of mind and of sight, itching over whole body, flatulency, stitches in hepatic region; skin completely inactive, cold and dry large quantities of sugar in urine.

Fluoricum Acidum
Uncommon buoyancy of mind; fears nothing and I self-satisfied-disposition to be exceedingly anxious, causing perspiration, aversion to his own family. There is great lassitude with loss of strength limbs go to sleep although he lie on them. Violent jerking burning pains confined to a small spot. Sleeplessness without inclination to sleep, short sleep refreshes him, drowsy and sleepy in the early evening. Very frequent discharge of light colored urine with increased thirst and whitish purpled colored sediment in the urine, intolerable burning in urethra during and after urination.

Nitric Acid
Great general weakness feeble reactions; extreme sensitivity and nervous trembling, are market features in this remedy. Patients greatly broken by long suffering, finally anemia and emaciation are marked. Male sexual organs are in constant stare of irritability. Sexual desire is increased and erections troublesome at night. The female is greatly troubled by the constant itching and burning and sexual desire.

Picric Acid
well indicated remedy for all for brain fag tired feeling on least exertion all over body; with heaviness excessive languor; no desire to talk or do anything indifferent to everything is obliged to lie down it seems difficult to move limbs; great muscular debility readily winded by walking up hill inclined to day sleepiness poor appetite, general sense of torpidity. Burning along spine, and very great weakness of legs and back soreness of all muscles and joints.

Oxalic Acid
Great cheerfulness and clearness of mind, thinking of his ailments aggravates them, aversion to talk, increased appetite, thirst with loss of taste along with nauseating sensation. Frequent micturition and profuse discharge of urine associated with burning in the urethra as from acrid drops. Pain in glance penis while urinating. Numbness, pricking, causing a sensation of coldness and weakness in the back; the back is too weak to support the body. Upper extremities pain first in the right deltoid region radiating to right forearm and wrist. Weakness of the lower extremities they are gone to sleep paralysis stiffness with numbness.

Conclusion
Homoeopathic medicines are based up on Similia, Similbus Curentur, “likes cure likes”. All homoeopathy medicines will prescribe on bases of totality of symptoms. Homoeopathic medicines are safe, economic and human friendly.

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