



(REVIEW ARTICLE)



Different medicinal herbs for madhumegam (diabetes mellitus) prescribed in selected classical siddha literature: A review

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Abstract

Siddha system of medicine, one of the ancient medical systems has the great potential of medicinal resources as repository since ages. Diabetes is a major lifestyle disorder, the prevalence of which is increasing globally. Diabetes mellitus is compared with *Madhumegam* in Siddha literature. Most of the contemporary drugs work on insulin metabolism and several metabolic pathways to reduce hyperglycaemic conditions. The conventional Siddha drugs works on the same platform through its basic principles. Siddha medicinal plants which are having hypoglycaemic activity by involving various metabolic pathways are taken in to account and considered for a review. This process will create some new ideas in the avenue of research.

Keywords: Siddha; Madhumegam; Diabetes mellitus; Plants

1. Introduction

Neerizivu noi, one of the clinical entities is comes under *Neer Perugal Noikal* (polyuric conditons). *Madhumegam* is one among them compared to Diabetes mellitus. it reveals there may be more than 10 million population will suffer by this metabolic disorder. Siddha pharmacopeia comprises more than 1000 medicinal plants to cure various diseases. This article focus in order to bring out Siddha medicinal plants which are commonly identifiable, easy to avail all time, with lesser adverse effect, cost effective and with evident research data favoring anti diabetic activity.

1.1. Madhumegam (Diabetes mellitus)

Saint *Yugi* describes 20 types of *Mega noikal* of which 4 in Vatham (wind), 6 in Pitham (fire) and 10 in Kabam (water). *Madhumegam* is one among the 6 *Pitha mega noikal*. According to Siddha, Madhumegam is characterized by excessive and frequent urination, sweet odour of urine, identified by the presence of ants and house flies at the urinated place, recognizing smell of sugar when urine is heated, loss of weight, resulting in the gradual deterioration of the Udalthathus (7 body humours). The literature says the etiological factors will be of excessive sexual indulgence, over eating, laziness, and depression, desire to the worldly things, heredity, and high intake of ghee, milk, toddy, meat, tasty fishes and food with sweet taste. In general the therapeutic advice may be of low calorie diet, exercise and managing with appropriate medicines, In Siddha system the treatment modality lies on the medicines, life style changes and exercise comprised of mind and body like Yogam (Yogic exercises), Some of the potent anti diabetic herbs which are commonly used in Siddha medicines.

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2. Materials and Methods:

The review process is adopted to collect the information of medicinal plants to treat *madhumeagam* mentioned in siddha system through various siddha textbooks available in libraries. The Siddha aspect of the medicinal plants is furnished in the Table 1.

Table 1 List of medicinal plants based on Taste, Potency, and Division

S.no	Common name	Botanical name	Taste	Potency	Division
1.	<i>Ashoku</i>	<i>Saraca asoca</i>	Astringent	Cold	Pungent
2.	<i>Atti</i>	<i>Ficus racemosa</i>	Astringent	Cold	Sweet
3.	<i>Alli</i>	<i>Nymphaea nouchali</i>	Slightly Astringent	Cold	Sweet
4.	<i>Alamaram</i>	<i>Ficus henghalensis</i>	Astringent	Cold	Sweet
5.	<i>Avarai</i>	<i>Cassia auriculata</i>	Astringent	Cold	Sweet
6.	<i>Inji</i>	<i>Zingiber officinale</i>	Pungent	Hot	Pungent
7.	<i>Perichehu</i>	<i>Phonex dactilifera</i>	Sweet	Hot	Pungent
8.	<i>Kadalazhinjil</i>	<i>Salacia reticulata wight</i>	Astringent	Cold	Pungent
9.	<i>Kadartengay</i>	<i>Lodoicea maldivica</i>	Pungent	Hot	Pungent
10.	<i>Karungali</i>	<i>Acacia catechu</i>	Astringent	Cold	Pungent
11.	<i>Kalyana murukku</i>	<i>Erythina varieta</i>	Bitter,Pungent	Hot	Pungent
12.	<i>Kanchori</i>	<i>Tragia involucrate</i>	Bitter	Hot	Pungent
13.	<i>Kizhkai nelli</i>	<i>Phyllanthus amarus</i>	Astringent, Bitter, Sour, Sweet	Cold	Sweet
14.	<i>Kudasap palai</i>	<i>Holarhena pubescens</i>	Astringent,Slightly Bitter	Hot	Sweet
15.	<i>Kezhvaragu</i>	<i>Eleusine coracona</i>	Sweet	cold	Sweet
16.	<i>Kothumai</i>	<i>Triticum aestivum</i>	Sweet	Cold	Sweet
17.	<i>Kovai</i>	<i>Coccinia grandis</i>	Bitter	Hot	Pungent
18.	<i>Seendil</i>	<i>Tinospora cordifolia</i>	Bitter	Hot	Pungent
19.	<i>Thannirvittan</i>	<i>Asparagus racemosus</i>	Sweet	Cold	Sweet
20.	<i>Thenku maram</i>	<i>Cocos nucifera</i>	Sweet	Cold	Sweet
21.	<i>Thetran</i>	<i>Strychnos potatorum</i>	Bitter	Hot	Pungent
22.	<i>Thottar chinungi</i>	<i>Mimosa pudica</i>	Sweet,Astringent,Bitter	Hot	Pungent
23.	<i>Nannari</i>	<i>Hemidesmus indicus</i>	Sweet,Slightly Bitter	Cold	Sweet
24.	<i>Naval</i>	<i>Syzygium cumini</i>	Astringent	Cold	Pungent
25.	<i>Nillapanai</i>	<i>Curculigo orchioides</i>	Sweet	Cold	Sweet
26.	<i>Neithar kizhangu</i>	<i>Nymphaea pubescens</i>	Sweet	Cold	Sweet
27.	<i>Pathiri</i>	<i>Stereospermum colais</i>	Astringent	Cold	Sweet
28.	<i>Pirkku</i>	<i>Luffa acutangala</i>	Sweet	Cold	Sweet
29.	<i>Maruthu</i>	<i>Terminalia arjuna</i>	Astringent	Cold	Pungent
30.	<i>Ma</i>	<i>Mangifera indica</i>	Astringent	Hot	Pungent
31.	<i>Mungkil</i>	<i>Bombusa arundinacea</i>	Astringent	Hot	Pungent

32.	<i>Vallai kodi</i>	<i>Convolvulus repens</i>	Sweet	Cold	Sweet
33.	<i>Vadumai</i>	<i>Prunus dulcis</i>	Bitter	Hot	Pungent
34.	<i>Vilamichu ver</i>	<i>Plectranthus vettiveroides</i>	Bitter	Cold	Sweet
35.	<i>Vilamaram</i>	<i>Limonia acidissima</i>	Astringent	Cold	Pungent
36.	<i>Vel</i>	<i>Acacia nilotica</i>	Astringent	Cold	Sweet
37.	<i>Elam</i>	<i>Elettaria cardamomum</i>	Pungent	Hot	Pungent
38.	<i>Lavangam</i>	<i>Syzygium aromaticum</i>	Pungent	Hot	Pungent
39.	<i>Valmilagu</i>	<i>Piper cubeba</i>	Pungent	Hot	Pungent
40.	<i>Chandanam</i>	<i>Santalum album</i>	Bitter,Slightly Astringent	Cold,Hot	Sweet
41.	<i>Agil</i>	<i>Aquilaria agallocha</i>	Pungent,Bitter,Slightly Sweet	Hot	Sweet
42.	<i>Thamarai</i>	<i>Nelumbo nucifera</i>	Sweet,Astringent	Cold	Sweet
43.	<i>Ati maduram</i>	<i>Glycyrrhiza glabra</i>	Sweet	Cold	Sweet
44.	<i>Akkara karam</i>	<i>Anacyclus pyrethrum</i>	Pungent	Hot	Pungent
45.	<i>Amukkura kizhangu</i>	<i>Withania somnifera</i>	Bitter	Hot	Pungent
46.	<i>Kunkumappu</i>	<i>Crocus sativus</i>	Bitter	Hot	Pungent
47.	<i>Jadamanji</i>	<i>Nardostacys grandiflora</i>	Pungent	Hot	Pungent
48.	<i>Rudraksham</i>	<i>Elaeocarpus sphaericus</i>	Pungent	Hot	Pungent
49.	<i>Shambirani</i>	<i>Styrax benzoin</i>	Pungent	Hot	Pungent
50.	<i>Pungu</i>	<i>Pongamia pinnata</i>	Bitter,Astringent	Hot	Pungent
51.	<i>Piray</i>	<i>Streblus asper</i>	Sweet	Cold	Sweet
52.	<i>Azhinjil</i>	<i>Alangium salifolium</i>	Bitter	Hot	Pungent
53.	<i>Etti</i>	<i>Strychnos nux</i>	Bitter	Hot	Pungent
54.	<i>Udimaram</i>	<i>Lannea coromandelica</i>	Astringent	Hot	Pungent
55.	<i>Changan</i>	<i>Azima tetracantha</i>	Bitter	Hot	Pungent
56.	<i>Vembu</i>	<i>Azadirachta indica</i>	Bitter	Hot	Pungent
57.	<i>Puvarasu</i>	<i>Thespesia populnea</i>	Bitter,Astringent	Hot	Pungent
58.	<i>Adu tinda palai</i>	<i>Aristolochia bracteolate</i>	Bitter	Hot	Pungent
59.	<i>Kazharchi kodi</i>	<i>Caesalpinia bonduie</i>	Bitter	Hot	Pungent
60.	<i>Cheruppada</i>	<i>Mollugo lotoides</i>	Pungent	Hot	Pungent
61.	<i>Kottai karanthai</i>	<i>Spaeranthus indicus</i>	Bitter	Hot	Pungent
62.	<i>Poduthalai</i>	<i>Phyla nodiflora</i>	Bitter,Astringent	Hot	Pungent
63.	<i>Paranki pattai</i>	<i>Smilax china</i>	Sweet	Cold	Sweet
64.	<i>Cherangkottai</i>	<i>Semecarpus anacardium</i>	Bitter	Hot	Pungent
65.	<i>Thuththi</i>	<i>Abutilon indicum</i>	Sweet	Cold	Sweet
66.	<i>Panai</i>	<i>Borassus flabellifer</i>	Astringent	Hot	Sweet
67.	<i>Sathikkai</i>	<i>Myristica fragrans</i>	Astringent,Bitter	Hot	Pungent
68.	<i>Echchura muli</i>	<i>Aristolochia indica</i>	Bitter	Hot	Pungent
69.	<i>Thantri</i>	<i>Terminalia bellirica</i>	Astringent	Hot	Sweet

70.	<i>Ponmusuttai</i>	<i>Sida acuta</i>	Bitter	Hot	Pungent
71.	<i>Ponnangkani</i>	<i>Alternanthera sessilis</i>	Sweet	Cold	Sweet
72.	<i>Mara manjal</i>	<i>Coscinium fenestratum</i>	Bitter	Hot	Pungent
73.	<i>Mundthri</i>	<i>Anacardium occidentale</i>	Sweet	Cold	Sweet
74.	<i>Thuvarai</i>	<i>Cajanus cajan</i>	Sweet	Cold	Sweet
75.	<i>Devadaru</i>	<i>Cedrus deodara</i>	Astringent,Slightly Bitter	Hot	Pungent
76.	<i>Nilakkumizh</i>	<i>Gmelina asiatica</i>	Slightly Bitter	Cold	Sweet
77.	<i>Vazhai</i>	<i>Musa paradisiaca</i>	Astringent	Cold	Pungent
78.	<i>Kadugu</i>	<i>Brassica juncea</i>	Pungent	Hot	Pungent
79.	<i>Perungayam</i>	<i>Ferula asafetida</i>	Bitter	Hot	Pungent
80.	<i>Marakarai</i>	<i>Catunaregum spinosa</i>	Astringent, Slightly Bitter	Hot	Pungent
81.	<i>Kodiveli</i>	<i>Plumbago indica</i>	Pungent	Hot	Pungent
82.	<i>Cheppu nerunjil</i>	<i>Indigofera enneaphylla</i>	Sweet	Cold	Sweet
83.	<i>Milagu</i>	<i>Piper nigrum</i>	Bitter,Pungent	Hot	Pungent
84.	<i>Nilavarai</i>	<i>Cassia senna</i>	Bitter	Hot	Pungent
85.	<i>Chirakam</i>	<i>Cuminum cyminum</i>	Pungent,Sweet	Cold	Sweet
86.	<i>Neichatti</i>	<i>Vernonia cinerea</i>	Bitter	Hot	Pungent
87.	<i>Vendayam</i>	<i>Trigonella foenum</i>	Bitter	Cold	Pungent
88.	<i>Kuruver</i>	<i>Vetiveria zizanioides</i>	Sweet	Cold	Sweet
89.	<i>Koththumalli</i>	<i>Coriandrum sativum</i>	Pungent	Cold,Hot	Pungent
90.	<i>Naruvili</i>	<i>Cordia dichotoma</i>	Astringent,Slightly Bitter	Hot	Pungent
91.	<i>Kattukodi</i>	<i>Cocculus hirsutus</i>	Astringent, Bitter	Hot	Pungent
92.	<i>Magizh</i>	<i>Mimusops elengi</i>	Astringent	Hot	Pungent
93.	<i>Chukku</i>	<i>Zingiber officinale</i>	Pungent	Hot	Pungent
94.	<i>Parutti</i>	<i>Gossypium herbaceum</i>	Astringent,Sweet	Hot	Pungent
95.	<i>Merugu</i>	<i>Alocasia indica</i>	Pungent	Hot	Pungent
96.	<i>Manjitti</i>	<i>Rubia cordifolia</i>	Pungent,Bitter	Hot	Pungent
97.	<i>Lavanga pathiri</i>	<i>Cinamomum tamala</i>	Pungent	Hot	Pungent
98.	<i>Nervalam</i>	<i>Croton tiglium</i>	Bitter	Hot	Pungent
99.	<i>Chirunagappu</i>	<i>Mesua nagassarium</i>	Slightly Bitter,Astringent	Cold	Pungent
100	<i>Thalisa paththiri</i>	<i>Abies spectabilis</i>	Pungent	Hot	Pungent
101	<i>Puli</i>	<i>Tamarindus indica</i>	Pungent	Hot	Pungent
102	<i>Vilvam</i>	<i>Aegle marmelos</i>	Astringent,Bitter	Cold	Pungent
103	<i>Churai</i>	<i>Lagenaria siceraria</i>	Bitter	Cold	Sweet
104	<i>Kottikizhangu</i>	<i>Aponogeton monostachyon</i>	Sweet	Cold	Sweet
105	<i>Varagu</i>	<i>Paspalum scrobiculatum</i>	Sweet	Cold	Sweet
106	<i>Tinai</i>	<i>Setaria italic</i>	Sweet	Hot	Pungent
107	<i>Vengayam</i>	<i>Allium cepa</i>	Bitter	Hot	Pungent

108	<i>Cholam</i>	<i>Sorghum vulgare</i>	Sweet	Cold	Sweet
109	<i>Kaththari</i>	<i>Solanum melongena</i>	Bitter,Astringent	Hot	Pungent
110	<i>Vellilothram</i>	<i>Sympocos racemosa</i>	Astringent	Cold	Sweet
111	<i>Kalippakku</i>	<i>Areca catechu</i>	Astringent	Hot	Pungent
112	<i>Elumichai</i>	<i>Citrus limon</i>	Sweet,Pungent	Hot	Pungent
113	<i>Musuttai</i>	<i>Rivea ornate</i>	Bitter,Pungent	Hot	Pungent
114	<i>Ulundu</i>	<i>Vigna mungo</i>	Sweet	Cold	Sweet
115	<i>Nalvelai</i>	<i>Cleome viscosa</i>	Pungent	Hot	Pungent
116	<i>Nirmulli</i>	<i>Hygrophilla auriculata</i>	Sweet,Slightly Bitter	Cold	Sweet

3. Discussion

In this review I have mentioned 116 medicinal plants which have medicinal effect for diabetic diseases. Name tastes, potency and division of medicinal plants represented in table 1. By observing Table 1, 26 plants have bitter taste, 23 plants have sweet, 20 plants have astringent, 19 plants have pungent, 12 plants have astringent and bitter and etc. The predominant Potency and Division of medicinal plants represented in Figure 2. and Figure 3. Figure 1. denotes the Bitter (Kaippu) is the predominant taste, so it pacifies diseases of Pitham, it is inferred that Madhumeagam comes under Pitha diseases which can be managed by administering the medicinal plants given in this review.

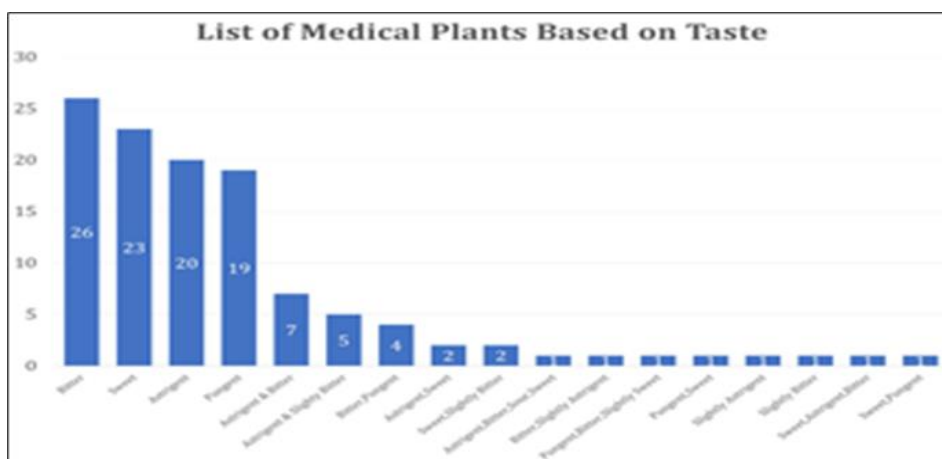


Figure 1 List of medical plants based on taste

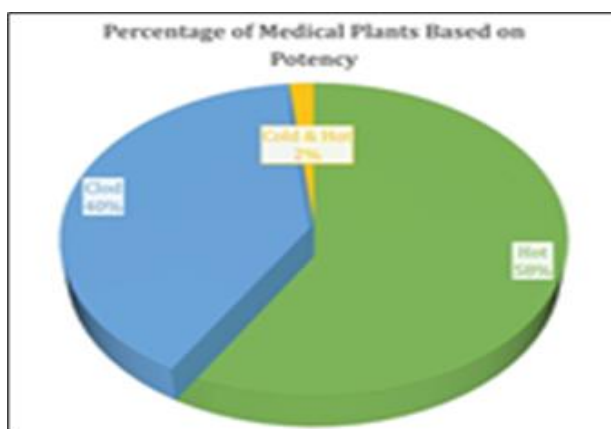


Figure 2 Percentage of medical plants based on potency

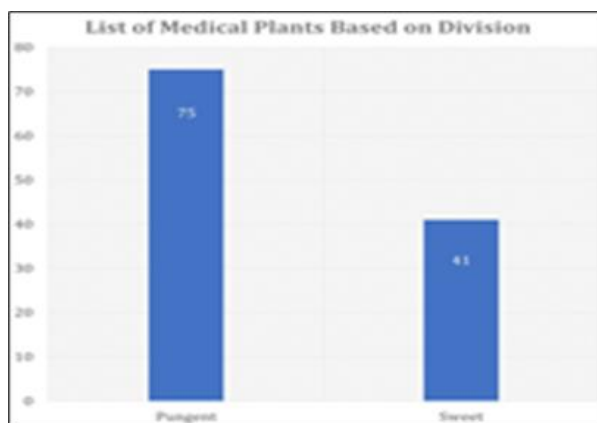


Figure 3 List of medical plant based on division

4. Conclusion

Madhumegam (diabetic melitus) is a major problem all over the world due to life style changes and mental stress but we could control this issue through medicine. There is much focus on herbal medicines based on taste for treating *madhumegam* due to less side effect and safety when compared to modern medicine. By this study I have collected 116 plants in total of 8 textbooks. It is essential to evaluate the studies on individual Siddha medicinal plants as well as Siddha formulations supporting anti diabetic activity in every step of the metabolic pathway of the disease in order to establish its clinical usage globally. Clinical documentation of compound Siddha formulations must be encouraged to promote mass level utilization for the society with minimal expenditures.

Compliance with ethical standards

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Disclosure of conflict of interest

No conflict of interest to be disclosed.

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