

Diabetes Mellitus (Madhumeha): An Ayurvedic Review

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Abstract: *Diabetes mellitus is one of the global health problems of present era resulting in serious long - term complications such as heart disease, neuropathy, nephropathy, retinopathy and even death. In Ayurveda, Madhumeha is mentioned one of the important diseases in which quantity and frequency of urination increase. Diabetes is a metabolic disorder result in deficiency or dysfunction of the insulin production. In Ayurveda there are 20 types of Prameha are described which are having similar symptomatology. If it is not treated is converted into Madhumeha. Madhumeha is a type of VatajaPrameha. In Ayurvedic literature have the knowledge about causes, risk factors, prevention and treatment of Madhumeha which are helpful for treating Diabetic Mellitus.*

Keywords: Diabetes mellitus, Madhumeha, Prameha

1. Introduction

Diabetes mellitus has gained enormously fast becoming the world's largest chronic, metabolic disease characterized by elevated levels of blood glucose level, which leads to serious damage to the heart, blood vessels, eyes, kidneys and nerves over a period of time. The most common is type 2 diabetes mellitus disease India has become by WHO as the country with the fastest growing population of Diabetic patients. About 422 million people worldwide have diabetes.

In Ayurveda there are 20 types of Prameha are described which are in generally described by production of excess amount of urine Prabhotavila Mutrata and increased frequency of micturition Baram - Baram Mehati. if the twenty Prameha if not treated is converted into Madhumeha. Madhumeha is a type of VatajaPrameha

2. Material and Methods

The basic and conceptual materials were collected from the Ayurvedic classics viz. with their available commentaries, research papers and journals.

Madhumeha Hetu:

Aharaj Avam Viharaj Karana: Sedentary lifestyle, excessive sleep, curd, meat soup of domestic, aquatic, animal, milk products, freshly harvested food, jaggery preparation and all other Kapha promoting substance, laziness, intake of food which is cutaneous, sweet, fatty and liquid.

Santarpanatha Karana: - All etiological factor mentions for the manifestation of SantarpanathaVikar.

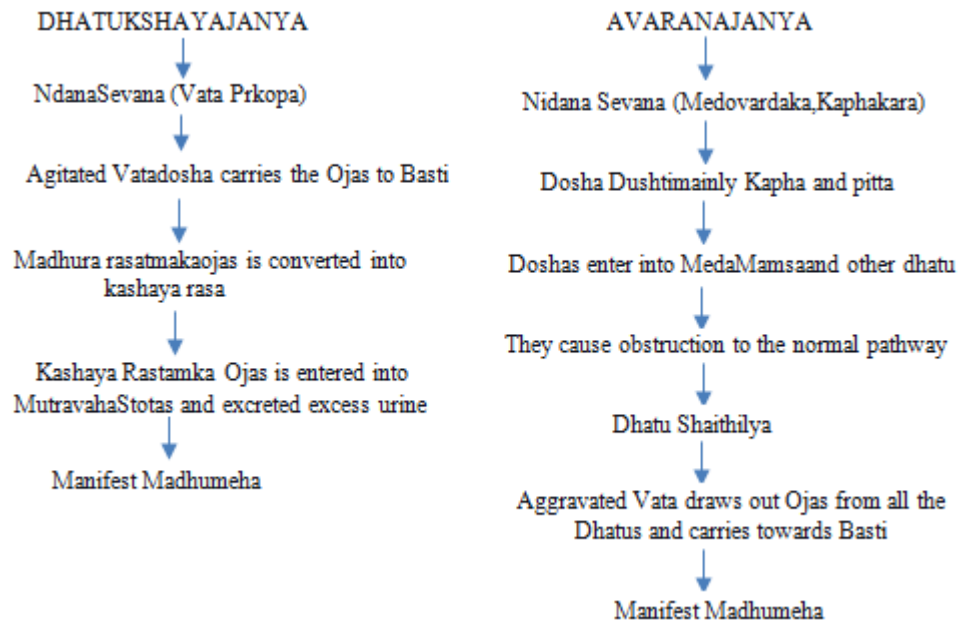
Adibalapravruttha: Due to morbidity of Shukra and Shonita. (Hereditary disease - inherited from the parents). Activities that aggravate Meda, Mutra, and Kapha, are main etiological factor for Prameha. Two main etiological factor are - 1) Sahaj - hereditary or congenital and 2) ApathyaNimittajadue to Incompatible dietetics and activities.

Purvaroop (Premonitory symptoms): In Ayurveda Prameha described by early symptoms of the disease. feeling of burning sensation in the palms and soles (HastapadaDaha), unctuous and slimy (Kleda) skin all over the body, feel heavy, thirst and a sweet taste in the mouth etc., and MoothraMadhuryam (sweetness of urine), bad smell and white in colour, stupor, debility dyspnoea, they are accumulation of dirt on the teeth (mouth, eyes, nose, and ears). More growth of hairs and nails.

Madhumeha Samanya Lakshana (Sign and Symptoms): - Patient of Madhumeha passes urine which is astringent, sweet, pale and unctuous, (c. s. ni 4/44). Madhumeha patient passes urine having sweet in taste and smell of body resembling like honey (S. S CI 6/57)

Madhumeha Samprapti - All above etiological factor aggravateKapha, Pitta, Medha, Mamsaand obstruct normal pathway

Aharaj Viharajkaran Santarpanatha Karanaadibalapravruttha Apathya Nimittaj



Classification (Bheda): - Pramehas – There are totally 20 types of Prameha according to doshas
 VatajaPramehas. – 4
 PittajaPramehas – 6

KaphajaPramehas –10
 Out of these, diabetes mellitus is termed as Madhumeha. It is one of the four VatajaPrameha

| Types | Charak | Sushrut | Vagbhat |
|---------------|------------------------|-----------------------|-----------------------|
| Kaphaj | 1. Udakameha | 1. Udakameha | 1. Udakameha |
| | 2. Iksuvalikarasameha | 2. Iksuvalikarasameha | 2. Iksuvalikarasameha |
| | 3. Sandrameha | 3 Sandr Meha | 3. Sandrameha |
| | 4. Sandra Prasada | - | 4. Sandra Prasada |
| | 5. SuklaMeha | 4. Pistameha | 5. Pistaameha |
| | 6. SukraMeha | 5. SukraMeha | 6. SukraMeha |
| | 7. Sitameha_ | - | 7. Sitameha |
| | 8. Sikatameha | 6. Sikatameha | 8. Sikatameha |
| | 9. Sanairmeha | 7. Sanairmeha | 9. Sanairmeha |
| | 10. Alalameha | - | 10. Lalameha |
| - | 8. Surameha | - | |
| - | 9. Lavanameha | - | |
| - | 10. Phenameha | - | |
| Pittaj | 1. Ksudrameha | 1. Ksudrameha | .1 Ksudrameha |
| | 2. Kalameha_ | - | 2. Kalameha |
| | 3. Nilameha | 2. Nilameha | 3. Nilameha |
| | 4. Lohitameha | 3. Sonitameha | 4. Raktameha |
| | 5. Manjisthameha | 4. Manjisthameha | 5. Manjisthameha |
| | 6. Haridrameha | 5. Haridrameha | 6. Haridrameha |
| - | 6. Amlameha | - | |
| Vataj | 1. Vasameha | Vasameha | Vasameha |
| | 2. MajjamehaSarpimeha | 2. Sarpimeha | 2. Majjameha |
| | 3. Hastimeha | 3. Hastimeha | 3. Hastimeha |
| | 4. Madhumeha orOjameha | 4. Madhumeha | 4. Madhumeha |

Upadrava (Complications): - Daha (burning sensation), Trishna (thirst), Hridadaha (Sour belching), Moorcha, Anidra, Kampa, Krisha (emaciation), Swash (increased breathing), too much elimination of urine (PrabhutMootrata), improper digestion (Ajeerna), Vamana. Troubled by appearance of deep seated PramehaPidikas (Eruption), Feeling of heaviness of the body.

Chikitsa (Management Of Madhumeha):

Chikitsa Siddhant: - 1) Treatment for obese and strong diabetics aimed at reducing the obesity of the patient Apatarpana Chikitsa).2) Krusha (emaciated) and weak patient of diabetics can cleansing procedures followed by the treatment to nourish the body with specific management (SantarpanaChikitsa).3) Both types of diabetics successively treated with distinct therapy and diet regimen.

SaniarpanaApatarpana Chikitsa in Madhumeha: - Madhumeha has been described as SantarpanoViyadhi as well as ApatarpanoViyadhi. The former is Apathya Nimitaja Madhumeha & later is Sahaja Madhumeha or Madhumeha due to Dhatu Karshana due to long standing Prameha. Accordingly, two forms of Madhmehis are encountered one who is Sthoola& Balavan for whom Apatarpana is the best & the other who is Krusha & Paridurbala for whom Santarpana is the best.

I. ApatarpanaChikitsa: - is done in the form of Langana Langana - Pachana&Doshavaseehana. a) Langana this is done in Alpadashavastha where only UpavasaPipasa, Maruta AtapasevanaRookshaUdvartana, PragadaVyayama, Nishi Jagarana& so on, which are Kaphamedo Hara are helpful. b) Langana Pachana: This is done in Madhyama Doshavastha where along with Langana, Ama Pachana is done with Tikshna Ushna Dravyas. c) Doshavasechana: This is done in Bahudoshavastha where the Shodana of Doshas are done from UbhayaMargas. Apart from the above karmas.

II. SantarpanaChikitsa: - **Laghusantarpana** Chikitsa is Prashastha for Krusha and Durbala Rogis the following can be administered in Madhumehi. a) Manthas, b) Kashaya, c) Yava, d) Churna, e) Lehya, f) Laghu Bhakshya. These formulations should be prepared such that they cause Santarpana without causing Vridhi of Kapha& Medas. Among all these Yava is considered as best for Madhumehi. Which were discussed in Pathya Apathya.

III. ShrestaAushadhaPrayoga in Madhumeha: - Shilajathu, Guggulu&Loharaja: These three Dravyas are medicines par excellence in Madhumeha, either in Krusha or Sthoola, as they are Virukshana&Chedaneya, which is good for Kapha, as well as Rasayana, which is good for Dhatukshaya&Vatavrudhi.

ShodhanChikitsa: - Type II D. M. patient who are Sthaulya or Balvan should be given Shodhan Chikitsa i. e., Vamam or Virechan according to Dosha predominance and Asthapan Basti if patient has predominant involvement of Vata Dosha. Some Madhumeha NashakAsthan Basti are - PanchtiktaPanchprasritaNiruha Basti (Ch. Si. - 8/8), SomvalkakNiruha Basti (Ch. Si. - 10/43), MustadiYapana Basti (Ch. Si. - 12/15, 16), PrameharAsthan Basti (Su. Chi. - 38/76) are useful in DM madhumeha patients.

Shaman Chikitsa:

Single Herbaldrugs: - Haridra, Vijaysara, Palandu, Karvallaka, Amrita, Jambu, Nimba, Methika, Amalaki, Meshasringi, Karavallaka, Methika, Shilajit, Vijaysar, Jambu, Tejpatra, TvakGuduci, Bimbi, Khadirasara, Katphala, Kakamaci, Devadaru AmalkiSwaras may be used with Haridra Churna and Madhu (Su. Chi. - 11/18). Patient of Madhumeha can take total 1 Tula of Salsaradi Gana KwathBhawitShilajatu with decoction of Salsaradi Gana as Anupanam.

Other Formulations For Madhumeha

Ras Bhasma: - Swarnavanga Bhasma, Trivanga Bhasma, Vanga Bhasma, Apurvamalini Vasant Rasa Vangabhasma

Rasa Kalpa: - Vasant Kusumakar Rasa, Brihadvangeswar Rasa, Tarkeswar Rasa, TuvarakRasayana Kalpa

Vati: - MammajakGhan Vati, Shivagutika, Chandraprabha Vati, Shilajativadi Vati, Mehari Vati, Saptacakra Ghana Vati

Churna: - Triphala Churna, Yava Churna, Nyagrodhadh Churna, Nisamalaki Churna

Kwath: - TriphalaKwath, DarvyadiKwath, SalsaradiKwath, PhalatrikadiKwatha, KathakakhadiradiKwatha

Asav - Arista: - LodhraAsava, Madhvasav, Dantyarista

Ghrta (Medicated Ghee): - Trikathakadya Sneha (Tail orGhrta)

Avaleha: 1. Saraleha, 2. Gokshuradyavaleha

Ausadh Siddha Paniya / Udak: - Sarodak, Kushodak, Madhodak, Triphala Rasa Prevention of Complications Once the diabetes mellitus has developed then blood sugar level should be controlled by using Madhumeहार drugs and its complications should be prevented by using specific drugs and Rasayana - To prevent nephropathy - SilajatuRasayan and Chandraprabha Vati, to prevent retinopathy - Amalaki, Triphala.

To prevent neuropathy and for general health - Aswagandha, Atibala. To control hyperlipidaemia, hypercholesterolemia and to prevent atherosclerosis - Puran Guggulu, Rasona.

Pathya – Apathya Vivechana

A. Pathya Vichara in Madhumeha: A SthoolaMadhumehi usually presents with KaphajaLaxanas more, and the disease in him is SantarpanoViyadhi. Hence, he is Balavan. There is Kapha& Medo Uridhi, which does the Avarana of Vayu, leading to Anubandhatva of Dhusta Vayu. The line of treatment suggested here is Apatarpana, which also involves Ahara Vihara & Vichara along with Oushadha. Hence the modifications in these modalities should be Kaphamedohara. In other words, Ahara should be Virukshana, Chedaneya& Lekhana. Vihara should be PragadhaUdvartana, Vyayama& the Rajo Guna of Manas should be activated by way of Chinta. Which means Manas should be allowed function actively to avoid Alasya and not abnormally, so as to cause Dushti of Rajas and Vata. In principle inertia in the form of Tamoguna Pradhana Ahara Vihara or Vichara is the cause of KaphamedoDushti. Hence all efforts should be aimed at nullifying this effect by way of initiating dynamism in all aspects of the patient's personality.

The above principle should be regulated in such a balanced way, that a perfect Samyata of Tridoshas is achieved. The Pathya Apathya Vichara hence should be worked out carefully depending on the extent of Dosha Dushti, Dhatu Dusti & Ojo - Dushti. Ojas is the primary indicator of the Bala Kshaya as a result of Dhatu Kshaya. This can be assessed based on DourbalyadiLaxanas in the Rogi. Accordingly, Apatarpana Pathya should be adopted in Balavan Rogi & Santarpana Pathya in Durbala Rogi. The plan should be individualized depending on the Prakruti, Vikruti, Sara, Samhanana, Pramana, Satva Satmya, Abhyavaharana Shakti, Jarana Shakti, Vyayama Shakti, Vaya, Desha, Kala, Bala, & so on of the Rogi.

Vata Pradhana Madhumeha assumes high significance because this Dosha steers the disease into various phases of progression. The extent & manner of involvement of Vata decides the Sadhya & Asadyata of the disease. Vata can be managed only when it is in AnubandhaAvastha, and not when it is in AnubandhyaAvastha. A situation found by and large in Sthoola & Krusha Madumehis respectively. Recipes of Pathya & Apathya for Vata should be hence worked out depending on the presentation & stage of the disease. Pathya Apathya for Kapha & pitta Doshas should also be formulated accordingly. Madhumeha has been described as Anushanghi, which means Punarbhavi, a tendency to recur. Hence a Madhumehi should stick to Pathya throughout his life. The Pathya Apathya Nirdesha according to different authors and their Guna and karma have been classified into Ahara, Vihara & Achara.

Ahara: In general, all Aharas, which are Kaphamedokara, are Apathya in Madhumeha. In other words, Madhumehi should be cautious about taking Ahara, which is Madhura Rasa Pradhana, Guru and Abhishyandi.

It is advised to follow the general principles of food intake as laid down in Asta Vidha Ahara Vidhi Vishesha Ayatanas with special emphasis on Matra. One should always avoid Adhyashana Vishamashana and Atimatra Bhojana. In other words, the bottom line is fill only half of your stomach i. e. Ardha Souhitya while taking guru Ahara & do not take stomach full while eating Laghu Ahara i. e. Natitriptata. In case of Sthoola Madhumehi, Ushna Tikshna Lekhana Virukshana & Chedaneya Aharas can be used liberally, where as in Krusha Pramehi Laghu & Santarpana Ahara, which is not Kapha Medokara, should be given which means food like Yava are best. Taila Ghrita etc. Snigdha Dravyas, which are basically Kaphakara, can be used after samskara so that they are rendered Tarpaka as well as Kaphaedohara.

Laghu Tarpaka Pathya Kalpanas like Yusha Mantha, Yavagu, Kashaya etc. prepared from can be used generously among the pathyas mentioned for Madhumeha. Tikta Rasa, Yava & Madhu seem to be high in the priority lists of Ayurvedic classics.

Yava: - Yava is Ruksha, Sheeta, Guru, Madhura, Rasa Pradhana, Kashaya. It is Kaphahara, Sthairyakara & Balya hence is best for both Krusha & Sthoola Madhumehis. That is why numerous preparations of Yava have been advised.

Madhu: Guru, Ruksha, Kashaya and Sheeta Veerya & it is Pitta, Rakta & Kaphahara, moreover it is Yogavahi which means it has Samananukari Dravya prabhodhita Shakti. In other words, Madhu due to its Prabhava assumes & magnifies Gunas of whatever Dravya is used along with it. Hence Madhu is used along with most of the Aharas & Aushadhas which are Kaphamedo and Mehahara but Madhu should be used in small quantities otherwise it causes Vata - vrudhi.

Tikta Rasa: It is Ruksha, Laghu & Pitta Kapha Shoshaka & hence is prescribed to be used predominantly in the form of Tikta Shaka. All the above can be used as Pathya in both Sthoola & Krusha Madumehis.

Pathya (favourable diet): Yava, Godhoom, Shyamaka, Kodrava, Bajara, Mudga, Chanaka, Tikta Shaka, Methika, Nimba, Karavellaka, Patola, Rasona, Udumbar, Jambu, Tala Phala, Kharjura, Kamala, Utpala, Jangal Mansa, Purana Sura, Sarsapa, Ingudi, Goghritadi Ahara.

- 1) Foods which have low glycemic index should be used and they should have predominantly Tikta rasa.
- 2) Small but frequent meals should be taken. Frequently green vegetables, leafy vegetables, high fibrous foods should be taken.

| Ahar | Name |
|------------|--|
| Cereals | Yava (Barley) are the best, different preparations of food, prepared from Barley, can be given e. g. - Mantha, Odana, Appopa, bread, Roti etc., 'Old rice (Oriza Sativa). Rice which crops within 60 days., Godhuma (wheat), Kodrava (grain variety - Paspolumscrobiculatum) |
| Pulses | Adhaki (red gram - Cajamuscajan), Kulattha (horse gram), Mudga (green gram) should be taken with bitter and kashaya leafy vegetables. |
| Vegetables | Green Banana, Tanduleyaka (Amaranthus spinosus), Matsyakhshi (Alternanthera sessilis), Bitter vegetables (Tiktasakam) like - Methica (Methi - Fenugreek leaves) - Karavellaka (Bitter gourd) |
| Fruits | Orange, Watermelon, Apple, Jambu (Syzigiumcumini), Kapitha (Feronia limonia) Amlaki (Emblia officinalis) |
| Oils | Nikumbha (Danti - Baliospernummontanum), Ingudi (Balanitit aegyptiaca), Atasi (Linum usitatisimum), Sarsapa (Mustard). |

Vihara: Chankramana, Snana & Asana, four Kaya Viharas viz., Vyayama, Mruja, Nishi Gamana, Jagarana and Udvartana are potent Kapha - medo - hara Viharas which can be performed in increased magnitude by a Sthoola Madhumehi as he is Balavan. In a Krusha Madhumehi these should be advised depending on his Bala. If a Krusha Rogi is unable to perform Vyayama then only Mruja & Chankramana can be advised with some Vishama Vishama Shareera Nyasa.

Among Viharas Vyayama figures prominently in the classics as an effective Kapha - medo - hara Vihara. Pragada Vyayama can be performed depending on one's own interest & Knowledge & Vishama Shareera Nyasa can be performed by both Sthoola & Krusha Pramehis in the form of

Yoganas but one should be careful while performing these as they can be harmful if improperly performed. A regular & sustained.

Vyayama: Any karma or action of the body that produces Shareera Ayasa is Vyayama is Alasya Hara, Sthoulya Apakarshana and causes Sthiratva Laghuta & Agnideepthi the person becomes Klama, Pipasa, Ushna, Sheeta, Klesha Saha. Vyayama should be performed to a man's Ardhashakti otherwise it can be harmful. Vyayama Thus is best in Madhumeha especially in Sthoola & Balavan.

Vihar (life style): Apathya Vihar (unfavourable life style) - Sukha - Asana, Sukha - Sayana, Diva - Sayana, Ati - Maithuna, Vegadharanadi.

Pathya Vihar (Upashaya) (favourable life style) - Chankamana, mild to moderate Vyayama, Snana, Udvartana, Krina, Pranayama, Yogasana etc. Exercise daily for 30 - 45 minutes or walk 3 - 5 km

Yogasanas: - Pranayama & Meditation: Breathing exercise & meditation techniques are also proving as an effective panacea beneficial in stress management. Thus, acting synergistically in diabetic management. Meditative techniques like transcendental meditation of Maharshi Mahesh yogi, Sudarshana Kriya of Pandit Sri Sri Ravishankar are popular innovations in this field. Yoga asana - following yoga asana can be practiced • Pashchimotanasana • Kurmaasana • Halasana • Mayurasana • Suryananaskara • Pranayama (Bhastrika).

ApathyakarAhara (Unwholesome) - Dugdha (Milk), Dadhi (Curd), Takra, Ikshurasa (SugarCane Juice)), Guda, Pista - Anna, Nava - Anna, Urada, Gramya - Audaka - Anoop Mansa, Naveen Sura AvumMadhya, Adhyasan, Viruddhasana, Kapha - MedaVardhak Ahara, Madhur - Amla (Sour) - Lavana (Salty) RasadiAhara.

Apathyakar Vihar: Anupashaya: Sukha - Asana, Sukha - Sayana, Diva - Sayana, Ati - Maithuna, Vegadharanad (suppression of natural urges)

3. Discussion and Conclusion

Madhumeha which can be correlated with Type - 2 DM disease is growing globally that cannot be treated permanently by only medicine but proper Pathya Aahar and Vihar (proper diet and regimen, daily lifestyle) should also be followed. so that Madhumeha (Diabetes mellitus) is Yapya can be controlled.

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