



Conceptual study of Role of Gokshuradi Guggul in Mootravaha Srotodushti in Madhumeha with special reference to Diabetic Nephropathy

KEYWORDS

Prameha, Madhumeha, Diabetic Nephropathy, Gokshuradi Guggul

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ABSTRACT

Introduction- Diabetes Mellitus has become ever growing world-wide health problem in all socio-economic groups leading to various complications like Nephropathy responsible for morbidity & mortality. Ayurvedic approach to pathogenesis of Madhumeha can provide solutions to rising cases of Diabetic Nephropathy by using various preparations. Gokshuradi Guggul is one of such ayurvedic preparations. Objective-1) To study Mootravaha Srotodushti in Madhumeha & its correlation with Diabetic Nephropathy. 2) To study efficacy of Gokshuradi Guggul in Mootravaha Srotodushti in Madhumeha. Materials & Methodology-1)Literary study of Mootravaha Srotodushti in Madhumeha & Diabetic Nephropathy was done.2)Literary study of efficacy of Gokshuradi Guggul in Mootravaha Srotodushti in Madhumeha was done. Discussion - Gokshuradi Guggul has Mootravaha srotodushti nashak (correcting vitiated urine carrying channels) & tridoshaghna (balancing 3 constituents of body- vata, pitta, kapha) effect in Prameha. Conclusion- Gokshuradi Guggul improves nourishment & maintains patency of Mootravaha srotas & improves resistance of kidney tissues against any adversity.

Introduction-

The word 'Diabetes' means 'passing through' referring to 'Polyuria'- a symptom historically present in those affected by disease. Diabetes Mellitus (D.M.) has become ever growing world-wide health problem in all socio-economic groups leading to various complications like Nephropathy which are responsible for morbidity & mortality. It is observed that even a patient having well controlled D.M. can suffer from Nephropathy. As per Varughese and Jacob (2010), currently approximately 20-30 % of diabetic patients (type 1 & 2) develop nephropathy in developed and some developing countries like India, which is a leading cause of End-Stage-Renal-Disease.

In modern medical sciences, symptomatology of Madhumeha can be correlated with features of Diabetes Mellitus. Vitiated doshas (vata, pitta, kapha) in Madhumeha vitiate Mootravaha Srotas affecting its normal functions.

"Tasya chaiva pravrutasyaaparipakwa eva vatapittashleshmano yada medasa

Sahakatwamupetya Mootravahai srotamsi anusrutyaadho gatwa

Bastermukhamashrityanirbhidhyante tada Pramehan janayanti||"

(Sushrut Nidanstan 6/4...pg. no. 502) (Sharma, 2010)

Hetu Sevan (causative factors like fast food, faulty life style, stress free life etc.) leads to aama-aparipakwa (malformed) Vata, Pitta and Kapha doshas which get mixed in a body of a person and integrated with meda dhatu(fat) and move down through urine carrying channels to the opening of urinary bladder & are excreted, then different types of Prameha originate.

According to Ayurveda, Nephropathy is a disease of Mootravaha Srotas which develops mainly due to glomerular sclerosis and arteriosclerosis in kidney. All three vitiated doshas are responsible for disease, but vitiated kapha is mainly responsible for blocking of micro vessels and developing microangiopathy.

Ayurveda comes across as therapeutic healing science that uses natural elements and traditional techniques to balance vitiated doshas and eradicate diseases from body by using various ayurvedic preparations. 'Gokshuradi guggul' is one of such combined ayurvedic preparations mentioned in 'sharanghara samhita' and 'Yoga Ratnakar' which acts on Mootravaha srotas improving kidney functions. Thus, Gokshuradi Guggul is very effective in pathogenesis of Madhumeha as well as in prevention of its complications.

"Ashtavimshatisankhyani palanyaniya gokshurat | Vipachet shadguno nire kwatho grahyo ardasheshitah ||

Tatah punah pachet tatra puram saptapalam kshipet | Gudapakasamakaram dnyanta tatra vinikshipet ||

Trikatu triphala mustam churnitam palasaptakam|Tatah pindikrutasyaasya gutikamupayojayet ||

Hanyat Prameham kruchcham cha pradaram Motraghatakam | Vatasram vatarogamshcha shukradosham tatha ashmarim ||"

(Sharangadhar samhita/ Madhyam khanda/7...pg. no. 206) (Tripathi, 2010)

"Trikatutriphalatyam guggulum cha samamshakam | Gokshurakwathsamyuktam gutikam karayed budhah ||

Deshakalabalapekshee bhakshayechchaanulomikam | Na chaatra pariharoasti karmakuryaddyathepsitam ||

Pramehanvatarogamshcha vatashonitamevacha | Mootraghatam mootradosham pradaram chaanunashayet ||"

(Yoga Ratnakara/Prameha/1-3/Uttarardha...pg. no.87) (Shastri, 2005)

Objectives-

- To study Mootravaha Srotodushti in Madhumeha and its correlation with Diabetic Nephropathy.
- To study efficacy of Gokshuradi Guggul in Mootravaha Srotodushti in Madhumeha.

Materials and Methodology-

- Literary study of Mootravaha Srotodushti in Madhumeha

& Diabetic Nephropathy was done.

- II. Literary study of efficacy of Gokshuradi Guggul in Mootravaha Srotodushti in Madhumeha was done.

Observations-

Definition - "Prakarshena prabhutam, varamvaram va mehati, mootratyagam karoti yasmin roge sa Pramehah |"

(Madhav Nidan/Prameha/Uttarardha...pg. no. 1)(Upadhyaya, 2005)

When a person passes turbid, large quantity of urine with a frequent micturition, the disease is called as Prameha.

Definition- "Kashaya madhuram pandu ruksham mehati yo narah |

Vatakopadasadyam tam prateeyan Madhumehinam |"

(Charaka Nidansthan 4/44...pg. no. 552) (Kushawaha, 2009)

One who passes urine as Kashay (astringent), Madhur (sweet), Pandu (pale) and Ruksha (rough) is diagnosed as a case of Madhumeha (Diabetic Mellitus). It is incurable.

In Prameha, aggravated tridoshas vitiates Medovaha srotas (fat carrying channels) and ultimately vitiates its mulasthan (main origin) - 'Vrukka' (kidney) and leads to affliction of kidney physiology.

Classification of Prameha:-

According to 3 main constituents of body-

- Kaphaja Prameha
- Pittaja Prameha
- Vataja Prameha

"Mootravarnadibhedena bhedo Meheshu kalpyate |"

(Madhav Nidan/ Prameha...pg. no.22) (Upadhyaya, 2005)

According to urine colour morbidity, main three types of Prameha has been further classified as 10 sub-types of Kaphaja Prameha, 6 sub-types of Pittaja Prameha and 4 sub-types of Vataja Prameha.

'Madhumeha' has been classified and described under 'Vatika' type of Prameha.

Types of Madhumeha- (Upadhyaya, 2005)

- Dhatukshayaj (Dhatu waning)
- Doshavrutta (Dhatu covered by doshas)
- According to Nidana (Etiological factors)
- Sahaj (Hereditary) Prameha
- Apathyanimittaj (Acquired) Prameha

Apathyanimittaj Prameha can be further classified as-

- Santarpanjanya (Satiating)
- Apararpanjanya (Fasting or in sickness)

According to Samhanana (Body constituents) of a Diabetic patient-

- Sthula (obese) & Balawana (Strong) Prameha
- Krusha (Thin) & Durbala (Weak) Prameha

Hetu (causative factors) –

- Aasyasukham (comfortable sitting habits)
- Swapnasukham (excessive/faulty sleeping habits)
- Sheeta, snigdha, madhur, medya anna sevan (cold, unctuous, sweet, fatty food consumption)

- Dravaanna sevan, navaanna-pana sevan (liquituous, new-fresh food products and soft drinks consumption)
- Dugdha-guda vikruti sevan (milk, jaggary & their products consumption)
- Divaswap (nap during day time)
- Avyayam (lack of exercise)
- Aalasya (lassitude)

Poorva-rupa (Prodromal features) -

- Hasta-pada tala daha-supti (burning sensation & numbness in hands & feet)
- Snigdhangata-pichhilangata (oiliness & sliminess of body)
- Guru gatrata (heaviness in body)
- Tandra-atinidra (drowsiness-excessive sleeping)
- Sada-aalasya (lethargy- lassitude)
- Talu-gala-jivha-danteshu malotpatti (Appearance of dirt in palate, throat, tongue and teeth)
- Durgandhita shwasa (halitosis)
- Mukha madhuryata (sweetness in mouth)
- Pipasa (excessive thirst)
- Swedadhikya (excessive sweating)
- Sheeta priyatva (fond of cold things)
- Kesha-nakhaati vrudhhi (excessive growth of hairs and nails)
- Jatilibhava kesheshu (matting of hairs together)
- Visra sharir gandha (fleshy smell in body)
- Mootre cha mootradoshan (morbidity in urine)
- Shatpada pipilikabhishcha sharir-mootrabhisaran (crawling of bees & ants on the body & urine)

Rupa (signs & symptoms) -

- Prabhuta mootrata (excessive urination)
- Avila mootrata (turbid urine)

All poorva rupas of Prameha get aggravated as rupas.

Mootravaha Srotodushti Lakshanas-

1) Vruddhi lakshana (symptoms due to excess accumulation)

- Basti nistoda (bladder pain), aadhman (flatus)
- Krute apiakruta sadnyata (frequent urge for micturition)
- Mootra vrudhhi (Increase in quantity of urine)
- Muhurmuhu mootra pravrutti (dribbling micturition)

2) Kshaya lakshana (symptoms due to waning)

- Mootrakruchha (dysuria)
- Mootravaivarnya (abnormal colours in urine eg. turbid, reddish etc.)
- Sasra mootra pravrutti (haematuriya)
- Basti nistoda (bladder pain)
- Pipasa, mukha parishushyata (excessive thirst & dryness of mouth)
- Alpa mootrata (decrease in quantity of urine)

3) Dushti lakshana (symptoms due to vitiation)

- Atisrushta-atibaddha mootra pravrutti (urine incontinence/ retention)
- Prakupita-bahal mootra pravrutti (Polyuria)
- Sashool-sadaha-alpalpabhikshanam mootra pravrutti (painful-burning micturition, frequency of micturition)

Samprapti (Pathogenesis)-

"Bahvabadham medo mamsam shareerajakledah shukraam shonitam

vasa majja lasika rasashchoujah sankhyat iti dushyavisheshah |"

(Charak Nidansthan 4/7...pg. no.547) (Kushwaha, 2009)

"Medashcha mamsam cha shareerajam cha kledam kapho bastigatah pradushya |

Karoti Mehan samudeernamushnaistaneva pittam paridushya chaapi ||

Kshineshu dosheshvavakrushya dhatun sandushya Mehan kuru anilashcha ||”

(Madhav Nidan/Prameha/2-3/Uttarardha...pg. no.3) (Upadhyaya, 2005)

“Tasya chaiva pravrutasyaaparipakwa eva vatapittashleshmano yada medasa

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“Mootravarnadibhedena bhedo Meheshu kalpyate |”

(Madhav Nidan/ Prameha...pg. no.22) (Upadhyaya, 2005)

“Kalenopekshitaah sarve yadyanti madhumehataam |”

(Ashtanga Hridaya Nidansthan 10/20...pg. no. 504) (Kunte & Shastrinavre, 2012)

Due to ignorance, all types of Prameha get converted into Madhumeha.



Diabetic Nephropathy- Definition-

It is defined as microalbuminuria greater than or equal to 20mg/L. It is a progressive kidney disease caused by angiopathy of capillaries in kidney glomeruli. It is one of the microvascular complications of D.M. and is a prime indication for dialysis in many Western countries.

Risk factors- (Shah, 2012) (Mohan, 2005)

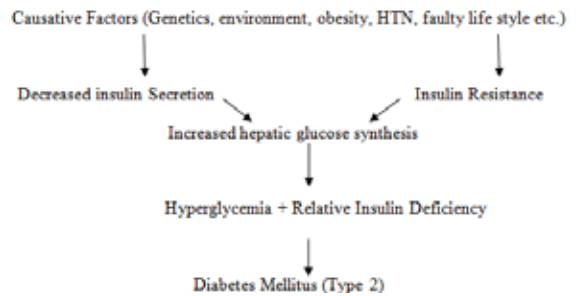
- Long standing Diabetes Mellitus
- Persistent Hyperglycemia
- Hypertension
- Hyperlipidemia
- Previous H/O MI
- Male gender
- Age (usually above 50 yrs in type 2 diabetic patients)
- Obesity, over weight

- Smoking, tobacco
- Familial H/O hypertension or Diabetic Nephropathy
- Lack of physical activity
- Stress & occupation
- Ethnicity (eg. Pima Indians, South Asians etc.)
- Microalbuminuria ≥20 mg/L
- BUL > 40 mg %
- Sr. creatinine > 1.4 mg %

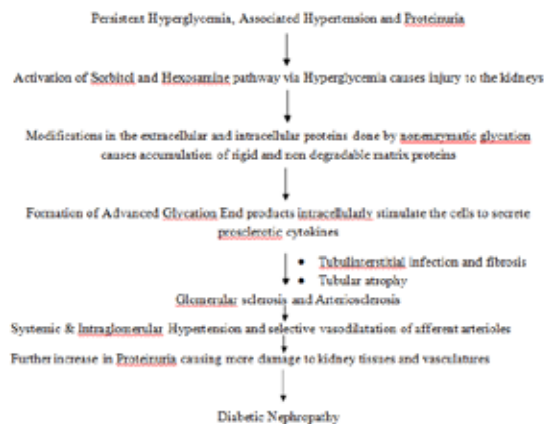
Signs & symptoms- (Shah, 2012) (Mohan, 2005)

- Increased blood pressure
- Initially Periorbital swelling, later general body swelling
- Unintentional weight gain(due to fluid accumulation) or sometimes weight loss
- Foamy appearance of urine (due to proteinuria)
- Urine incontinence/retention
- Burning micturition
- Nausea, vomiting, anorexia
- Malaise, fatigue, weakness, nervousness
- Headache (specially in morning)
- Blurred vision
- Postural giddiness, resting palpitation, excessive sweating
- Trouble sleeping

Pathogenesis of D.M. (Mohan, 2005):-



Pathogenesis of Diabetic Nephropathy:-



Gokshuradi Guggul :- (Tripathi, 2010)

Contents: - Gokshur – 28 Pala = 112 Tola = 1120 grams

Purified Guggul – 7 Pala = 28 Tola = 280 grams

Triphala – 3 pala (each dravya- 1 Pala) = 12 Tola = 120 grams

Trikatu – 3 Pala (each dravya- 1 Pala) = 12 Tola = 120 grams

Musta – 1 Pala = 1 Tola = 10 grams

Table No. 1

Action of Gokshuradi Guggul (Phadke, 1960)(Chunekar,

2010) :-

Dravya with Latin Name	Rasa (Taste)	Virya (Active Potency)	Vipak (Metabolic Property)	Guna (Features/ characteristics)	Karmukata (Action)
1) Gokshur (Tribulus terrestris)	Madhur	Sheeta	Madhur	Guru (heavy), Snigdha, Sheetata, Dipan (appetizer), Balya, Rasayana	Vata- Pittaghna, Basti Shodhan, Rasadhātu vardhan (increasing rasa dhātu). Useful in all disease of Mootravaha srotas.
2) Guggul (Commiphora mukul)	Tikta (bitter), Katu (pungent), Kashaya (astringent)	Ushna (hot)	Katu	Laghu (light), Ruksha, Sara (easily movable), Vishad (clean), Tikshna (strong), Sukshma (fine), Lekhan, Rasayana	-Tridoshaghna -Acts on all 7 Dhatus, specially Medoghna. Kledoghna, Mehaghna, -Acts on mulasthan of medavaha srotas-Vrukka, -Srotorodha nashak
3) Triphala a) Haritaki (Terminalia chebula) b) Bibhitaka (Terminalia bellerika) c) Amalaki (Emblic-officinalis)	Pancharasa (Except Lavan Rasa)	Anushna (neither cold nor hot)	Madhur	Dipan, Sara, Rochak (pleasant)	Meha-Kushtha Nashak (corrects Diabetes – skin diseases)
4) Shunthi (Zingibar officinale)	Katu	Ushna	Madhur	Laghu, Vata- Kaphaghna, Pitta Shamak (palliative), Agni-dipan, Amapachan, Vrushya (aphrodisiac), Grahi (holding capacity)	- Corrects sroto – rodha (obstruction) in madhumeha - Increases dhatwagni & corrects Dhātu Shaithilya in madhumeha -Useful in pathogenesis of Madhumeha
5) Marich (Piper nigrum)	Katu	Ushna	Katu	Laghu, Tikshna, Ruksha, Dipan, Pramathi (agitating), Vata-Kaphaghna, Lekhan	Eliminates vitiated doshas from srotas by Pramathi effect -Improves kidney functions by tikshna guna
6) Pip-pali (Piper longum)	Katu	Anushana	Madhur	Laghu, Snigdha, Tikshna, Rasayan, Vrushya, Vata-kaphaghna, Yogavahi (carrying and increasing effects of a drug), Dipan	-Useful in Mootra vikara (diseases) -It is srotorodha nashak thus corrects Sroto vibandha (covering). -It mainly acts on Raktavaha srotas (blood carrying channels) & due to shothaghna (removing swelling), it corrects oedema in Diabetic Nephropathy. -Due to rasayana, vrushya effects, it corrects ojkshaya.

7) Musta (Cyperus rotundus)	Tikta, Katu, Kashaya	Sheeta	Katu	Laghu, Ruksha, Trushna nighahan (correcting excessive thirst) Lekhan Pitta-Kaphaghna,, Mootra virechaniya (proper formation of urine)	-It corrects excessive increased thirst seen in Diabetes. - It removes excessive kleda from body. -It is also useful in burning micturition.
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Discussion:-

Gokshuradi Guggul is commonly used medicine in diseases of Mootravaha srotas & specially indicated in Prameha. It has Rasayana, Balya, Rakta-Prasadak, Basti-Shodhak, Kledaghna, Medoghna, Mehaghna, Tridoshaghna, Shothaghna & Lekhan properties. It acts by two ways in Madhumeha. Firstly it acts on pathogenesis of Madhumeha that takes place in the body by Kledaghna, medoghna, tridoshghna effects. Secondly it has Mootravaha Srotodushtinashak , rasayana, balya, rakta prasadak, lekhan , shothaghna properties & thus it is also very useful after development of disease to prevent various complications like diabetic nephropathy. Lekhan property (scraping) is useful in removing any blockage in micro vessels as well as macro vessels. Thus, it corrects srotorodha in Mootravaha as well as Medovaha srotas in madhumeha caused due to vitiated kaphadi doshas. Above all properties of Gokshuradi Guggul improves nourishment & maintains patency of mootravaha srotas & improves resistance of kidney tissues against any adversity & thus helps in repairing & preventing damage to kidney vasculatures & tissues.

Role of Gokshuradi guggul in Mootravaha Srotodushti in Madhumeha:-



Conclusion:- Administration of Gokshuradi Guggul is very useful in diabetic patients suffering from Nephropathy by improving renal functions and avoiding damage to kidney vasculatures & tissues and may bring new hope in such patients who usually face chronic renal failure & ultimately to death.

Scope for future study:-

Gokshuradi guggul is useful in all diseases of Mootravaha srotas including Diabetic Nephropathy. Thus, further studies can be executed by focusing on effects of Gokshuradi Guggul on various diseases related to Nephrology including clinical trials.

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