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REVIEW ARTICLE

REVIEW ON ROLE OF SHODHANA (BIO-PURIFICATION) IN STHULA MADHUMEHI (NIDDM)

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Abstract

Bio-purification therapy is well known procedure for its Excellency to cure the disease from the root cause. Due to enormous benefits of shodhana karma (purificatory therapy) it has grabbed a worldwide attention. Though it has wide range of applicability but mainly indicated in Bahudoshavastha like madhumeha. In present era lifestyle has changed drastically due to various reasons like Modernization in terms of food and habits which bring up diseases like avaranajanya madhumeha (NIDDM). The prevalence rate of NIDDM is reaching peak due to involvement of multifactorial causes which has drawn attention for its management. Vamana karma (emesis) and virechana karma (purgation) are best indicated in sthula madhumehi (NIDDM). The proper application of shodhana karma (purification therapy) involves different steps among them Poorvakarma (Preparatory measures) takes an important role. So Vagbhata has contributed / mentioned the application of rookshana (drying therapy) before shodhana snehana (Internal oleation) in Avaranajanya madhumeha (NIDDM) like condition to avoid its complications. Rookshana karma (drying therapy) helps in correcting vitiated kapha and meda, which are prime doshas involved in manifestation. Considering the importance of rookshana therapy an attempt is made by collecting few previous research works to analysis the efficacy of rookshana as preparatory procedure for bio-purification in avaranajanya madhumeha (NIDDM). On observation of clinical data it can be concluded that bio-purification is effective clinically and statistically in prevention and management.

Keywords: Bio-purification, emesis, purgation, shodhana, rookshana, madhumeha, NIDDM

Introduction

Madhumeha is a disease which is listed in mahagada due to its severity and chronicity¹. Madhumeha may be due to Svanidana prakopajanya, avaranajanya or dhatukshaya². Avaranajanya madhumeha (NIDDM) can be categorized under santarpanajanya vikara (diseases due to over nutrition) due to its

pathogenesis. NIDDM is one of the commonest prevalent lifestyle disorders. The incidence and prevalence rate are reaching its highest peak³. In present scenario the NIDDM is most prevalent due to modernization in the form of sedentary lifestyle, faulty food intake and habits. The multiple factors are involved in manifestation of

disease like environmental factors, genetic factors and others⁴. The disease mainly exhibits due to disturbed homeostasis involving most of dushyas (vitiated tissues) along with ojas⁵. Though it looks to be simple in the initial stage but ends up in dreadful complications if left untreated. Seeking to the condition there are many research works are undertaken for the management of disease but the results are unsatisfactory. So it is the priority research area for many researchers.

Apatarpana (depletion therapy) is the line of treatment adopted in santarpanajanya vyadhi (diseases due to over nutrition). So madhumeha is condition of Bahudoshha (excessive aggravation of dosha) where application of shodhana karma helps in eliminating the large quantity of vitiated doshas. Multiple, Radical and long lasting benefits of shodhana (Purification) helps in correcting the disturbed homeostasis⁶. Vamana (emesis) and virechana karma (purgation) are indicated in sthula madhumehi⁷. The application of shodhana (bio-purification) includes many steps but preparatory procedure plays an important role in bringing up shodhana (bio-purification) proper.

Rookshana (drying therapy) is one of the treatment modality explained in shadvidhopakrama (six treatments)⁸. Rookshana brings dryness or removes moistness and causes depletion of meda Dhatu in the body. Vagbhata explained the application of rookshana as

preparatory procedure before snehana karma in mamsala (fleshy), Medhura (fatty), those with kapha predominance, Vishamagni (erratic digestion) and Snehasatmya (accustomed to intake of lipids) to prevent the complications of internal oleation (snehana)⁹. The mode of application includes external therapy in the form of Udvartana (powder massage) and abhyantara (internal therapy) in term of diet and medicine. Rookshana plays a vital role in preparing the body for adequate bio-purification in sthula madhumehi (NIDDM). Based on this principle, few research works carried on rookshana as preparatory procedure for shodhana (bio-purification) in madhumeha which will be discussed in this article.

Prasanna Aithal.et.al (Hassan 2004)

Patients of either sex between the age group of 30 – 60 years having the signs and symptoms indicating sthula madhumehi (NIDDM) were selected. Complicated Type 2 Diabetes Mellitus and patients those who are unfit for shodhana (bio-purification) are excluded¹⁰.

Group A- rookshana purvaka vamana

In this group 12 patients were subjected to rookshana both bahya and abhyantara till samyak rookshana lakshana¹¹ appears followed by vamana therapy (emesis).

Group B- snehana purvaka vamana

In this group 12 patients were subjected to snehana followed by vamana therapy.

Table no.1: Effect of therapy in group A

Parameters	Mean				% Of Relief	SD (±)	SE (±)	T	p
	BT	AR	After vamana	Follow Up					
FBS in mgs	188.28	175.28	157.98	163.88	12.96	16.92	4.89	3.78	<0.01
PPBS in mgs	245.57	234.76	208.5	215.78	12.13	18.21	5.26	3.36	<0.01
Urine Sugar	1.75	1	0.5	0.33	34	0.49	0.14	2.36	<0.01
BMI (kg/m ²)	29.94	29.11	28.63	28.61	4.44	0.21	0.06	3.83	<0.01
Weight (kegs)	77.67	75.58	74.33	74.25	4.40	0.51	0.15	3.87	<0.05

(BT-Before Treatment, AR-After rookshana)

Table no.2: Effect of therapy in group B

Parameters	Mean			% Of Relief	SD (±)	SE (±)	T	P
	BT	After vamana	Follow Up					
FBS in mgs	195.06	173.55	184.35	5.09	8.94	2.58	6.14	<0.001
PPBS in mgs	236.45	219.27	228.46	3.38	12.60	2.64	5.35	<0.001
Urine Sugar	1.58	0.83	0.5	15.82	0.52	0.15	3.33	<0.01
BMI (kg/m ²)	29.89	29.42	29.51	1.27	0.22	0.06	3.5	<0.01
Weight (kegs)	73.41	72	72.17	1.69	0.52	0.15	3.33	<0.01

Shilapa. G.et.al (Hassan, 2005)

Thirty Patients were selected having impaired fasting glucose (IFG) and having BMI more than 30, women with history of gestational diabetes, first degree relative of the patient with NIDDM and with prodromal symptoms of DM. Patients with established type 1 or type 2 DM and Patients on steroids are excluded from the study¹².

Group A- rookshana puravaka virechana In this group 15 patients were subjected to rookshana both bahya and abhyantara till samyak rookshana lakshana¹¹ appears followed by virechana therapy (purgation)

Group B- snehana purvaka virechana

In this group 15 patients were subjected to snehana followed by virechana therapy.

Table no.3: Effect of therapy in group A

Parameters	Mean score			% of relief	S.D(+)	S.E(+)	T	P
	BT	AR	AT					
FBS	95.02	85.21	78.45	18.73	5.70	1.64	10.06	<0.001
BMI	33.64	32.08	29.42	12.43	0.76	0.24	17.31	<0.001
GTT	144.50	-	116.45	18.76	1.44	0.45	59.53	<0.001
T.CHOLESTROL	217.71	-	175.6	19.45	11.26	3.56	11.89	<0.001

(BT-Before Treatment, AR-After rookshana, AT-After Treatment)

Table no.4: Effect of therapy in group B

Parameter	Mean score			% of relief	S.D	S.E	t	P
	BT	AS	AT					

FBS	113.75	110.92	101.26	9.50	2.11	0.66	18.12	<0.001
BMI	34.01	33.83	32.30	5.21	0.30	0.09	18.13	<0.001
GTT	151.14	-	116.45	10.74	2.19	0.69	23.44	<0.001
T.CHOLESTROL	216.95	-	195.5	9.90	1.57	0.49	43.10	<0.001

(BT-Before Treatment, AS-After snehana, AT-After Treatment)

Discussion

Acharaya Charaka has explained avaranajanya madhumeha is due to wrong food habits, sedentary lifestyle and not undergoing timely shodhana (bio-purification). These etiological factor increases Pitta, kapha, mamsa and medas causing Avarana (obstruction) of Vata which in turn disturbs the homeostasis due to involvement of ojas⁵. Diabetes Mellitus initially exhibits with decreased ability of peripheral tissue to respond to insulin (insulin resistance) but ends up in inadequate insulin secretion (β -cell dysfunction) which is evident by pool of signs and symptoms suggesting the involvement of different systems thus patient goes on deteriorates¹³. These seek a serious attention for its management.

Palliative treatment in madhumeha (NIDDM) having bahu dosha (excess humour) does not provide significant improvements¹⁴. Bio-purification is considered as an appropriate treatment which does internal purification of the body through nearest possible route¹⁵. Such purification allows the biological system to return to homeostasis and to rejuvenate rapidly and also facilitates the desired Pharmacotherapeutics effects of medicines administered thereafter¹⁶. Acharaya Charaka advised the vamana and virechana karma in Santarpanaja madhumeha¹⁷. Application of shodhana (bio-purification) includes different steps among them preparatory procedure is being an important one which decides the whole outcome of bio-purification. Snehana and svedana karma helps in bringing the vitiated dosha from periphery (shakha) to GIT (kostha)¹⁸.

Snehana is contraindicated in avaranajanya madhumeha¹⁹ due to its complications (sneha

vyapath) like tandra (lassitude), utklesha (nausea), kandu (itching), kustha (skin diseases), Jvara (fever) and alike²⁰.The application of shodhana (bio-purification) without rookshana in atisnigdha (excess fatty) like obese diabetic patients will end up in over oleation²¹. Acharaya Vagbhata has mentioned the application of rookshana karma as preparatory procedure of snehana in mamsala (fleshy), medhura (fatty), those with kapha predominance, vishamagni (erratic digestion) and Snehasatmya (accustomed to intake of lipids) before bio-purification. By the application of snehana it precipitates the condition by increasing the oily portion of tissues (increase of liquidity) in medas (fat) and mamsa (muscle), oily and moist property of kapha dosha. In vishamagni (erratic digestion), snehana leads to indigestion due to weak bio-fire or quick digestion occurs due to over kindled bio-fire without producing adequate oleation. In persons accustomed to intake of lipids, the effects of snehana are not observed due to homologation²². mamsa (muscle) and meda (fat)²³ are the two main vitiated tissues along with kapha humour involved in the pathogenesis of madhumeha; snehana increases liquid content of both these tissues. So Rookshana karma helps to overcome excess liquidity and fatty properties of kapha by bringing dryness or through absorption of fluids in the body thereby it will pacify the oily content of meda (fat) and mamsa²⁴. Due to dry property it balances the bio-fire by correcting vata and kapha and reduces the oily property in fat intake accustomed persons²⁵. The therapeutic action of drying therapy overcomes the avarana (obstruction) and the complications of snehana. The therapeutic area of rukshana (drying

therapy) not only limited to management but also in the prevention of madhumeha i.e., pre-diabetes. Considering the role of rookshana (drying therapy) a few clinical researches are conducted as preparatory procedure for bio-purification.

Avarana can be compared with insulin resistance, due to lack of insulin uptake by insulin receptors or blockage of receptor by increased levels of triglycerides. In insulin resistance, the body's cells have a diminished ability to respond to the action of the insulin hormone. To compensate for the insulin resistance, the pancreas secretes more insulin.

Clinical trial conducted by Prasanna Aithal et.al., concluded that, there is significant improvement in the signs and symptoms of sthula madhumehi in rookshana purvaka vama karma group when compared to snehana purvaka vama karma. But the study has limited in providing the investigation related to HbA1c suggestive of long term benefits. The further observational studies are shown that rookshana karma alone is having equal effect when compared to snehana purvaka vama karma effects. Thus it substantiates the view of Acharya Vagbhata the essentiality of rookshana karma before bio-purification in madhumeha like conditions.

Clinical trial conducted by Shilpa G. et. al., concluded that there is very significant reduction in serum cholesterol and reduction of glucose level in pre-diabetes in rookshana purvaka virechana karma group in compare to snehana purvaka virechana group. Pre-Diabetes is a condition where the decreased ability of peripheral tissue to respond to insulin²⁶. Insulin

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2. Haridasashivashastri Paradkar, Editor, Asthanga Hridaya of Vagbhata, Nidanasthana Chapter- 10,

resistance is often found in predisposed persons most commonly in obesity²⁷. Rookshana karma has beneficial in reducing kapha and meda thereby reduction in obesity and improvement in insulin uptake. The study also revealed that reduced cholesterol level along with obesity which helps in preventing the complications including hypertension, myocardial infarction and alike. Virechana karma helps in elimination of vitiated dosha and brings normalcy of disturbed homeostasis²⁸. The follow up study of 3 months has shown no rise in glucose and lipid levels in the patients.

Conclusion

NIDDM is one of the burning problems, which makes patient disabled due to complications when left unnoticed. So a well designed management protocol is the need of the hour. Bio-purification is the choice of treatment in case of madhumeha (NIDDM) due to bahudosha (excess of humours); bio-purification allows the biological system to return to homeostasis and to rejuvenate rapidly and also facilitates the desired Pharmacotherapeutic effects of palliative medicines administered thereafter¹⁷. Rookshana karma also acts as Preparatory procedure along with snehana and Svedana in madhumeha. Rookshana (drying therapy) prepares the sthula madhumehi for snehana karma (oleation therapy) and succeeding purificatory procedures. This method of purification leads to easy and effective elimination of dosha without any complications. The review of clinical trials has shown the essentiality and benefits of rookshana (drying therapy) in the management of the avaranaja madhumeha (NIDDM) substantiating the view of Vagbhata.

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