Efficasy of Trivrutta Avaleha Virechan In Sthoulya (W.S.R Obesity)

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Abstract:-

In shodhankarma Virechan is one of the classical therapies mentioned in Ayurvedic text and important procedure in Panchakarma. In the present   pilot study   is focused on Clinical Evaluation of Trivrutta Avaleha Virechan in Sthoulya. It is found that Trivrutta Avaleha Virechan is significantly effective in Sthoulya w.s.r. to Obesity.

Keywords :- Virechan , Trivrutta Avaleha , Sthoulya , Obesity.

Introduction

Ayurveda – the elixir of life came into existence with two main objectives as "स्वास्थस्य स्वास्थ रक्षणम" and "आतुरस्य विकार प्रशमन "

It can also be stated that Ayurveda aims at curing of disease, prevent of disease and promote the health .For attainment of this objectives the acharya have advocated the Panchakarma .

In today's era, to maintain the integrity of health is very difficult due to varying factors such as dietary habits, work pressures, competitive lifestyle , all kinds of pollution and also following bad habits in wrong way. Due to these lifestyle changes human being has become victim of many diseases. Out of these Obesity is an important nutritional disorder caused by excessive food intake, lack of physical activity, genetic susceptibility and also caused by endocrine disorder.

India is slowly developing into a capital for metabolic diseases like Diabetes and Obesity. A survey report of 2012 states that almost 65% of adult urban Indians are-either overweight or obese or have abdominal Obesity.[1] The obesity increases the risk of many physical and mental conditions .It results in metabolic syndrome a combination of various clinical disorders which includes Diabetes type II, Hypertension and Hyper-lipidemia. In Ayurveda Obesity is described as 'Medoroga' or'SthoulyaRoga'. This is one of the Santarpanottha vyadhi one among the Ashtaninditaprush[2] and also Kaphaj-nanatmajvyadhi[3]. Ayurvedic texts like Charaka Samhita[4,5],Ashtanga Hridaya[6] have prescribed Samshodhana Chikitsa for the treatment of Santarpanajan yavyadhi like Sthoulya. The treatment of Stoulya can be done in following ways Nidana-parivrjana, Guruapatar panchikitsa, Satatakarshan chikitsa, Santarpanottha vikarchikitsa, Langhan chikitsa and Pathyapathy.[7]

Materials and Methods
Materials
Trial drugs used for Virechan are S
  1. Trivrutta Avaleha
  2. Goghrita
  3. Tiltail

Goghrita and Tiltail are the drugs used for Purvakarma of Virechan .

Formulation details

Trivrutta Avaleha will be prepared as mentioned in "Ashtanghriday".

त्रिवृत्कल्कषायाभ्यांसाधित।:ससितोहिम :

मधुत्रिजात: सयुक्तोलेहोहृद्यंविरेचनम॥

(अ.हृ.उ.३/९)

Methods of selection of study subjects (eligibility criteria)

Inclusion Criteria-

1. Patients showing classical lakshan of sthoulya
2. Patients of age group above 20 and below 60 yrs.
3. Patients having BMI of 30 or more in males and BMI≥28.6 in female
4. Waist/Hip ratio ≥ 0.95 in male≥0.8 in females
5. Patient of Sthoulya who are indicated for Virechan.

Exclusion Criteria-

1. Age less than 20 years and more than 60 year.
2. Patients having Metabolic disturbance, Hypertension, Diabetes Mellitus and other chronic and acute diseases and IHD, Alcoholic patients, Hypothyroidism, Cushing Syndrome, Pregnancy and Lactation.
3. Patient of Sthoulya who are contra- indicated for Virechan.

Matching criteria
Subjective Criteria
1. Trushnaadhikya(Increase thirst)
2. Daurbalya (weakness)
3. Kshudrashawas(difficulty in breathing)
4. Daurgandhya(odour of body)
5. Atikshudha(Increase Appetite)

Objective Criteria

1. BMI
2. Waist/hip ratio

Patients Indicated for Virechan were selected from Panchakarma OPD of institution and given vidhipurvak Virechan as follow:

Standard Operating Procedure(SOP) of the Virechan karma

| Day	Procedure	Aim of Procedure
3 to 7 days	External Snehan with Tila Taila Internal Snehan with Goghrita till Samyak Snigdha Laxanas	Srotovikasan Koshatabhigaman
8th o 9th day	Rest Day Bahya Snehan Swedan	Doshavilayan

9th or 10th day	Trivrutta Avaleha Virechan in 30 to 50 gms quantity on empty stomach	Shodhan
Next 3 to 7 days	Sansarjan Krama	Agnidipti

Observations and Results

Demographic Data

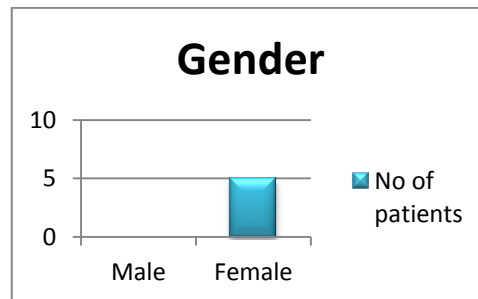| Age (in years)	No of patients	Percentage %
20-30	0	0
31-40	4	80
41-50	1	20
51-60	0	0

1.Age wise Distribution
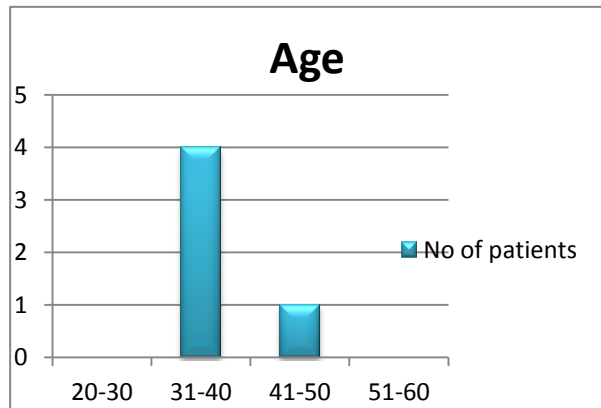
In this study it was found that the incidence was highest in the age group of 31-40 years constituting 80% of total number of patients. 20% patients were in the age group of 41-50 years
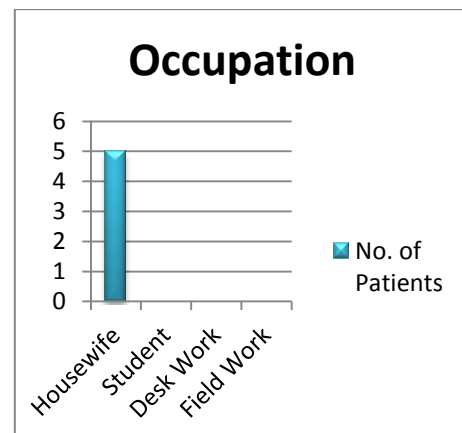
2.Gender wise Distribution

Gender	No of patients	Percentage %
Male	0	0
Female	5	100

In the sample taken for the study, 100% patients were females.

1.Occupation wise Distribution

Occupation	No. of Patients	Percentage %
Housewife	5	100
Student	0	0
Desk Work	0	0
Field Work	0	0

In the sample taken for the study, 100% patients were Housewives.
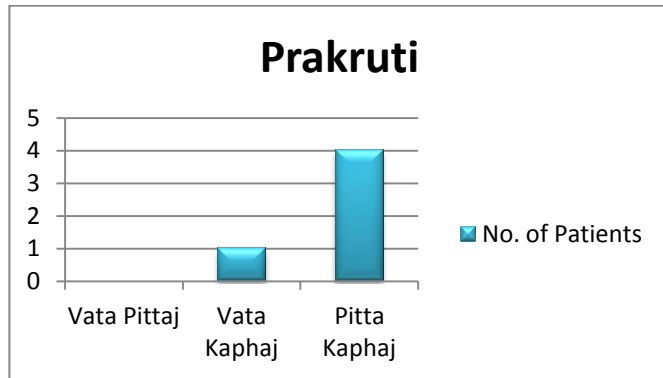
1. Marital Statuswise Distribution

Marital status	No of patients	Percentage %
Married	5	100
Unmarried	0	0

Marital Status
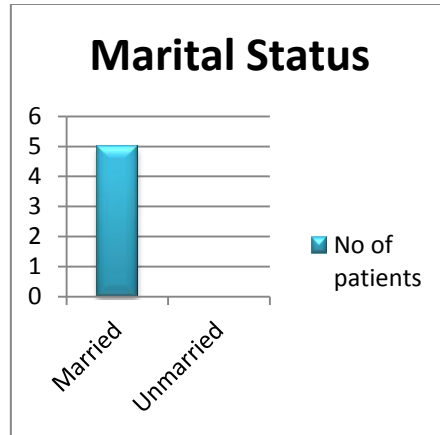
In the sample taken for the study, 100% patients were married.

2. Prakrutiwise Distribution

Prakruti	No. of Patients	Percentage %
Vata Pittaj	0	0
Vata Kaphaj	1	20
Pitta Kaphaj	4	80

Prakruti

The study shows that majority of the patients belonged to Pitta Kaphaj Prakruti (80%), 20% patients belonged to Vata-Kaphaj Prakruti.

3. Dietwise Distribution

Diet	No. of Patients	Percentage %
Vegetarian	2	40
Mix	3	60
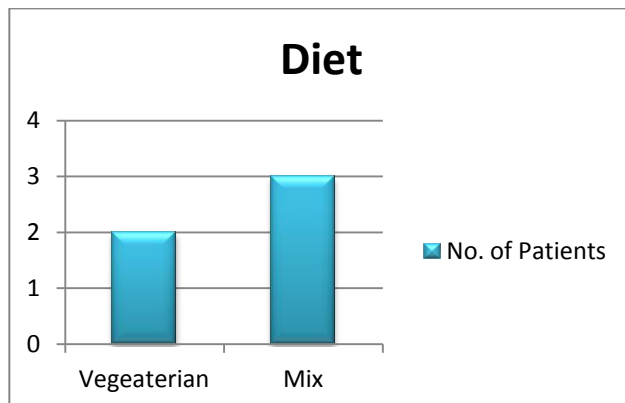
Diet

The present study shows that maximum No. of Patients hadmixed dieti.e.60% where as 40% of them had Vegetarian diet.

Statistical Analysis of Assessment Criteria
Subjective Criteria

1.   **Trushnadhikya**

Mean		M.D	S.D	S.E	t-Value	P-Value	Result
BT	2.60	1.600	0.54	0.108	6.5320	0.0028	Differ
AT	1.00						Significantly

The test statistic t equals 6.531987, is not in the 95% critical value accepted range: [-2.7764: 2.7764]
x=1.60, is not in the 95% accepted range: [-0.6800:0.6800]

After Virechan 61.54 % improvement was noted in this symptom.

2.   **Daurbalya**

Mean		M.D	S.D	S.E	t-Value	P-Value	Result
BT	2.20	1.2	0.44	0.088	6.000	0.0039	Differ
AT	1.00						Significantly

The test statistic t equals 5.999995, is not in the 95% critical value accepted range: [-2.7764: 2.7764]
x=1.20, is not in the 95% accepted range: [-0.5600:0.5600]

After Virechan 54.55 % improvement was noted in this symptom.

3.   **Kshudrashwas**

Mean		M.D	S.D	S.E	t-Value	P-Value	Result
BT	2.20	1.4	0.54	0.10	5.71	0.0046	Differ
AT	0.80						Significantly

The test statistic t equals 5.715471, is not in the 95% critical value accepted range: [-2.7764: 2.7764]
x=1.40, is not in the 95% accepted range: [-0.6800:0.6800]

After Virechan 63.64 % improvement was noted in this symptom.

4.   **Daurgandhya**

Mean		M.D	S.D	S.E	t-Value	P-Value	Result
BT	2.80	2	0.70	0.14	6.32	0.0032	Differ
AT	0.80						Significantly

The test statistic t equals 6.324553, is not in the 95% critical value accepted range: [-2.7764: 2.7764]

After Virechan 71.43% improvement was noted in this symptom.

5. Atikshudha

Mean		M.D	S.D	S.E	t-Value	P-Value	Result
BT	1.40	1.2	0.44	0.088	6.000	0.0039	Differ
AT	0.20						Significantly

The test statistic t equals 5.999995, is not in the 95% critical value accepted range: [-2.7764: 2.7764]
x=1.20, is not in the 95% accepted range: [-0.5600:0.5600]

After Virechan 85.71% improvement was noted in this symptom.

Objective Criteria
1.   BMI

Mean		M.D	S.D	S.E	t-Value	P-Value	Result
BT	2.60	0.8	0.44	0.088	3.999	0.016	Differ
AT	1.80						Significantly

The test statistic t equals 3.999, is not in the 95% critical value accepted range: [-2.7764: 2.7764]
x=0.80, is not in the 95% accepted range: [-0.5600:0.5600]

After Virechan 30.77% improvement was noted in this symptom.
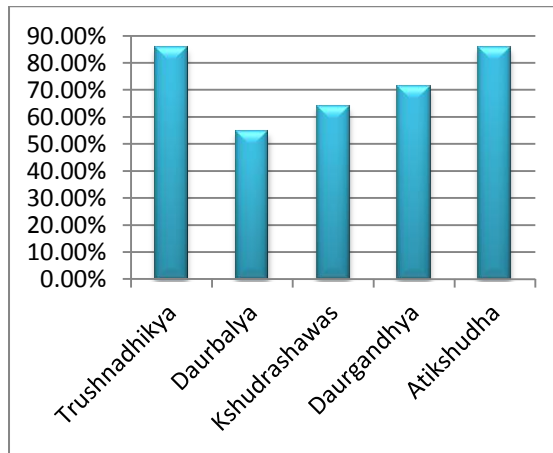
2.   WHR

Mean		M.D	S.D	S.E	t-Value	P-Value	Result
BT	2.80	1.6	0.547	0.109	6.5320	0.0028	Differ
AT	1.20						Significantly

The test statistic t equals 6.5320, is not in the 95% critical value accepted range: [-2.7764: 2.7764]
x=1.60, is not in the 95% accepted range: [-0.6800:0.6800]

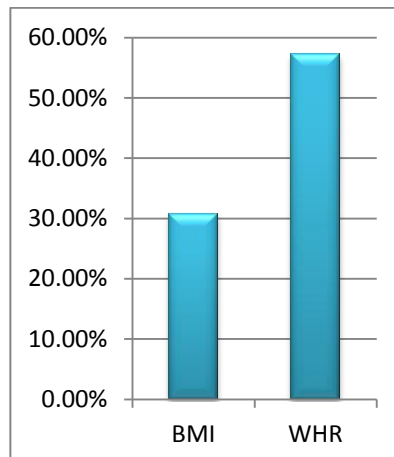After Virechan 57.14 % improvement was noted in this symptom.

Percentage of relief in Subjective criteria

Sr.no	Assessment Criteria	Percentage
1	Trushnadhikya	85.71
2	Daurbalya	54.54
3	Kshudrashawas	63.63
4	Daurgandhya	71.42
5	Atikshudha	85.71

Percentage of relief in Objective criteria

Sr.no	Assessment Criteria	Percentage
1	BMI	30.76
2	WHR	57.14

DISCUSSION

Discussion on Statistical Analysis:
For Subjective criteria:
By statistical analysis, Application of paired t test, result is found that Virechan with Trivrutta Avaleha is significantly effective in Trushnadhikya (at t value 6.5320at p value 0.0028), Daurbalya (at t value 6.000 at p value 0.0039), Kshudrashawas (at t value 5.71 at p value 0.0046), Daurgandhya (at t value 6.32at p value 0.0032), Atikshudha (at t value 6.000 at p value 0.0039) at < 0.05 % level of significance.

For Objective criteria:
By statistical analysis, Application of paired t test, result is found that Virechan with Trivrutta Avaleha is significantly effective in reducing BMI (at t value 6.000 at p value 0.0039), also reducing WHR (at t value 6.5320 at p value 0.0028), and < 0.05 % level of significance.

Properties of the drug used for the present study

Dravya	Rasa	Guna	Virya	Vipaka	Doshakarma	Karma
Trivrutta	Tikta , Katu	Laghu, Ruksha, Tikshna	Ushna	Katu	Kapha-pitta hara	Rechan, Bhedan
Twak	Katu ,Tikta, Madhur	Laghu, Ruksha, Tikshna	Ushna	Katu	Vata- Pitta hara	Varnya, Grahi
Ela	Katu, Madhur	Laghu, Ruksha	Sheeta	Katu	Kapha-vata hara	Hrudya, Dipak
Tamalpatra	Madhur, Katu	Tikshna, Picchil, Laghu	Ushna	Madhur	Kapha hara	Ruchya
Sharkara	Madhur	Snigdha	Sheeta	Madhur	Vata-pitta hara	Bruhan, Vrushya
Madhu	Madhur , Kashaya	Laghu, Tikshna	Ushna	Madhur	Kapha-vata hara	Sukshmamargan usarini ,Yogvahi

Probable mode of Action of Trivrutta Avaleha
Trivrutta Avaleha contains Trivrutta, Ela, Tamalpatra, Twak, Madhu and Sharkara. Trivrutta is main content in Trivrutta Avleha.Charaka has mentioned Trivrutta as Sukhvirechak, with Kapha-Pitta shamak, Bhedan and Rechan properties. Along with this Twak, Ela, and Tamalpatra are Tridoshshamak, Dipan, Pachan and Lekhan.Therefore Trivrutta Avaleha helps in correcting Jatharagni and Dhatuagni which further eliminates the Ama and dushit doshas with its rechan property.

Probable mode of Action of Virechan
Sthoulya is predominantly a Rasaja Vikara as per Sushruta[9]. Charaka
states it as a Medoja vikara[10].In the pathology of Sthoulya, the agni-vyapara has been emphasized. The Vataobstructed by morbid Medas stimulates the Koshthagni resulting in series of metabolic changes leading to Obesity. Agnimandya at the level of Rasa and Meda dhatu needsto be corrected.
Virechana is the Shodhana procedure which corrects the Agni at gross level as well as Dhatu level. As observed the Deepana Pachana drugs can remove the obstruction at the Dhatu level, followed by Snehapana which can dissolve the Meda dhatu dosha . These wastes can further be eliminated by Virechana procedure. Mobilization of these fats into mainstream by the procedures like Abhyanga and Swedana isdone. Expulsion of these waste products through Purgation further improves the functions of Agni and cleanses body channels. Moreover Virechana can give additional benefits of feeling of well-being in sense organs, elimination of doshas from body, Good sleep, and correction of appetite and digestion.[11]

Thus it can be summarized that Virechana therapy throws out accumulated toxic metabolites, ensures patency of micro and macro channels, optimizes absorption and assimilation of nutrients and pharmacological agents, permits the transport of ions and molecules through the cell membrane, and facilitates the desired pharmacokinetics of the curative remedies administered thereafter.

Conclusion

By the statistical analysis, Trivrutta Avaleha Virechan is significantly effective in Sthoulya w.s.r. to Obesity.

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