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# EFFECT OF *NAVAK GUGGULU* AND *UDAVARTAN CHURNA* IN THE MANAGEMENT OF OBESITY- A CLINICAL STUDY

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## ABSTRACT

The complete and multifold treatment for obesity is very important because it should not cause an adverse reaction to patients. The combined effect on *Navak Guggulu* and *Udavartan churna* can achieve weight loss with relief in all symptoms of obesity. On the other hand it does not cause *vata prakop* which must be looked after while reducing weight of an individual. Only dietary restrictions without many medicines may cause weakness in the patient, instead of diet restrictions, alteration of diet with the reference of classical texts is more important which does not harm the patients and also enables them to continue the same diet after the completion of the trial. There had been few aims and objectives while conducting the trial. 30 subjects were selected by randomized sampling method, necessary statistical tools were applied to the study and assessment of results was done. The study reveals that the combined effect of *Navak Guggulu* and Udavartana churna is very beneficial to reduce the weight of the patient without any adverse effect. Daily use of *Udavartana churna* also helps glow and rejuvenate the skin of the patients. This combination is very good treatment option for the treatment of obesity. It is without any adverse reaction in any individuals. It is the best treatment option to treat obesity. It is also effective for the management of dislipidemia. The tests of significance were applied to the symptoms of obesity. BMI, weight of the patients and 'p' value of all the symptoms is found very significant in all the parameters. Hence the treatment of obesity with *Navak guggulu* and *Udavartana churna* is proved very effective.

**Keywords:** Obesity, BMI, *Navak guggulu*, *Udavartan churn*, weight, Dislipidimia

## INTRODUCTION

Today, obesity in adults and children is taking a shape of epidemic. Every 5th person is either obese or over weight, or keeping the weight under control has become difficult, because of the sedentary life style or increasing urbanization. Food habits are changing rapidly. Day by day the outside eatables are being used more frequently. Tinned, packed ,stored and adverse food is used very often, chemicals like preservatives, additives, colors, flavors, sweeteners, essence etc. are also used in so many food items, which are ultimately harmful to human body. Excessive use of sugar, salt, dairy products, bakery products can lead to obesity. Children and adults are consuming these items again and again; hence they are becoming either obese or over weight. Lack of physical exercise,

undue stress, and faulty daily code of conduct is the key factors to develop obesity.

Human body stores the fat in the form of adipose tissues. Up to the adulthood the number of adipose tissues is also increased with age. Hence the etiological factors during childhood, promote the adipose tissues to increase their number, so the childhood obesity in latter life is very difficult to treat. When obesity occurs in adult age then only the size of the adipose tissue is increased which can be treated with medicine.

Assessment of obesity is done clinically. With non invasive methods and record can be kept with BMI, weight of the patient, skin fold thickness, hip circumference, waist circumference, hip waist ratio, etc. these are the important clinical tests which are very useful for assessment.

Many treatment options are available for obesity. But feasibility is more important. Management with eradication of etiological factors, diet suggestions, exercise and medication can offer better results to patients.

## AIMS AND OBJECTIVES

1) To study the role of *Navak Guggulu* in the treatment of obesity.
2) To study the effect of *Udavartan* in obese patients.

## MATERIAL AND METHODS

1) Study type: Open uncontrolled trial
2) Study centre-Shreee Saptashringi Ayurved College and Hospital, Nasik, Maharashtra.
3) Duration: 3 months
4) Sample selection: Randomized sampling method.

5) Observations: 30 patients
6) Inclusion criteria:
A) Age-14yrs and up to 50yrs.
B) Those who were willing to participate in the trial.
C) Patients of Swatantra Sthaulya (obesity)
7) Exclusion criteria:
A) Age below 14 and above 50yrs.
B) Patients having Hypertension, Diabetes mellitus, Renal failure and other life threatening diseases.
C) Patients of Paratantra Sthaulya e.g. Hypothyroidism, Cushing syndrome, Steroid induced obesity, PCOD, etc.
D) Drug induced obesity e.g. consumption of anabolic steroids, Hormone replacement therapy, calcium channel blockers, etc.
E) Seriously ill patients.
Instruments
1) Weighing scale machine.
2) Tailor tape (measuring tape).
3) Vernier caliper.
4) Sphygmomanometer.

### *Navak Guggulu*

*Vyoshagni triphala musta vidangyeheergguggulum shamam //*
*Khadansarvanjayed vyadhin medsheshmaamvatajan //*
 *Bhaishajya Ratnavali, medorog chikitsa - 48/ l43.*
1) *Shunti- Zingiber officinalis*
2) *Marich- Piper nigrum*
3) *Pippali- Piper longum*
4) *Chitrak twak- Plumbago zeylanica*
5) *Haritaki- Terminalia chebula*
6) *Bibhitak- Terminalia belerica*
7) *Amalaki- Emblica officinalis*
8) *Musta- Cyperus rotundus*
9) *Vidang- Embelica ribes*
10) *Shuddha Guggulu- Comiphora mukul* All in equal quantity.

Dose-500mg BD

*Anupana* – Honey

**Udavartan churn**

Udavartanam kaphaharam medasah pravilayanam //67//

Sthirikaranamanganam twakprasadkaram param/

        Ashatang sangrah sutra. 3/67.

1) *Haritaki- Terminelia chebula*

2)*Bibhitaki- Terminalia belerica*

3)*Amalaki- Terminalia officinalis*

4)*Musta- Cyperus rotundus*

5)*Guduchi- Tinospora cordifolia*

6)*Vidanga- Embelia ribes*

        Combination of above drugs was asked to apply on whole body before bath for 10 minutes.

Diet: *Guruch apatarpanam shreshtam sthulanam karshanam prati/* Charak sutra.21/20. Diet which is advised for *sthaulya* through classical texts.

Vihar: *Vyayamo anashanam chinta rukshalpo pramitashanam /*

*Vatatpobhayam shokah takrapanam prajagareh//* Charak sutra.21/27

        Patients were asked to increase the exercise, sexual habits , mental thinking progressively and they were also suggested that they should sleep for very short time for night about 5 to 6 hours.

**Assessment of the obese patients**

**Clinical parameters**

1. Weight

2. BMI. Normal- 20 to 25.

      Over weight- 25 to 30.

      Obese – bmi more than 30.

3. Skin fold thickness

4. Hip circumference

5. waist circumference

6. Hip waist ratio.

**Pathological investigations-**

1. Cbc , Esr 2. Urine- routine and microscopic 3. Bsl- fasting and post prandial.4. Lipid profile. 5.serum creatinine. 6.Blood urea.7. Liver function tests. 8.Thyroid function tests.

2. Clinically symptons of sthaulya were assessed with 4 grades as follows,

a) Nil-0

b)Mild +

c) Moderate ++

d) Severe +++

**Assessment of following symptoms was done**

1) *Asamyak upachaya*

2) *Karma- Asahatwata*

3) *Krichravyavayata*

4) *Duarbalya*

5) *Duargandhya*

6) *Swedadhikya*

7) *Atikshudha*

8) *Atitrishna*

9 ) *Kshudra shwas*

10) *Swapnadhikya*

11) *Udar aayam*

12) *Nitamb aayam*

13 )*Bahuparigh*

14) BMI

15) Skin fold thickness

**Follow up**-The clinical follow up was taken weekly. The prompt record of clinical examinations was kept weekly. The laboratory investigations were done before and after the study.

**Assessment of tolerability**

Though the combinations under study were purely herbal in origin, close observation of patients using drugs included in the trial was done carefully for any untoward effects.

**Statistical Analysis**

To know the efficacy of the drugs and to reach to the final conclusion, different

statistical tools were applied e.g. T test, Standard error, Standard deviation, Demography, Sampling, Graphical representations, etc.

## OBSERVATIONS

Today obesity has become very common issue in society. Most of the patients were taking excessive nutritious diet .We came across with sedentary lifestyle in most of the patients. Urban population is very prone for obesity. Comparatively rural population has less adiposity. Excessive use of liquid diet, cold drinks, ice creams, desserts, tea, coffee, salty food items, and packed food e.g. lays, kurkure, etc. Tinned food dairy products, bakery products these were very common food items in almost all patients. Day time sleep was very common in housewives. Today, the health of the housewives is deteriorating very frequently because of the lack of exercise and uncontrolled consumption of food. Demographically obesity is very common in female than in males, only 26.66% male were found affected obese in this study. This study also showed that family history of obesity plays important role to develop obesity in off springs. The significant cause of this is the genetic inheritance of the disease in the offsprings.40% individuals showed the strong family history of obesity. It is also possible that the food habits and similarity in occupation may develop obesity in all family members in some families.

Use of *Navak Guggulu* with honey twice daily can affect the accumulation of excessive water content in the body. All the contents of this combination are *ruksha* and *apatarpan*. They have property to provoge the *medodhatu agni*. Hence excessive fat can be burned and further accumulation is stopped. It also corrects the vitiation of *rasa dhatu*. Use of *trikatu* has to play better role to modify the constitution of *rasadhatu* and same is the case about *medodhatu*. Regular consumption of *Navak Guggulu* started reducing weight after 15 days during the course. *Guggulu* when combined with other *Deepan*, *Pachan*, *Lekhan* type of drugs played very appreciable role in reducing the excessive fat.

The external use of *Udavartan churna* eliminates the fat from subcutaneous tissues. Daily rubbing of *ruksha churna* like *Triphala, Vidanga* and *Guduchi* brought the firmness and stoutness of the muscles and skin. Hence along with obesity, it has very important therapeutic value for many skin diseases. *Triphala* is *ruksha*, *kashay*, *lekhan* and also helpful to eradicate the bad odour. Daily application of *Udavartan churna* helped to maintain the strength of the patient for daily routine. If it is applied for longer duration of time it can avoid the geriatric changes of the skin. Application of *Udavartan churna* on trunk and hips helped to reduce the fat on the same parts. Hence waist circumference and hip circumference were reduced notably. Patients were very happy after the completion of course because they felt comfortable for performing their daily routine. Along with oral medicine the do's and don'ts are very important.

Preferentially obesity is assessed with the BMI, (body mass index) more than 30 were termed as obese. All the patients showed notable reduction in BMI. Skin fold thickness was also reduced. We thought that skin folds can be treated as well with *udavartan*, as it reduces the looseness of the skin and subcutaneous fat.
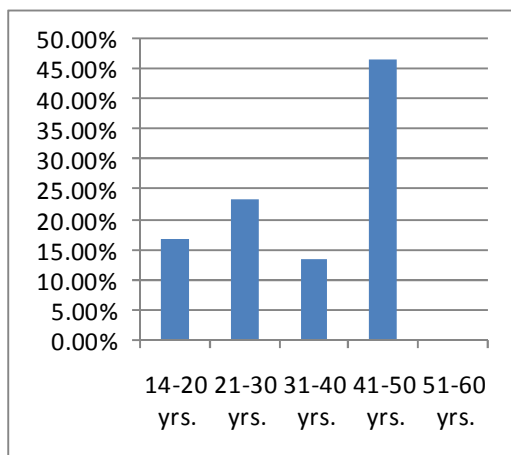
**Demographic details**

**Gender Distribution**
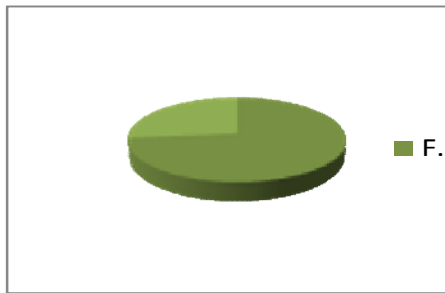


22 - F = 73.33%

8 – M =26.66%

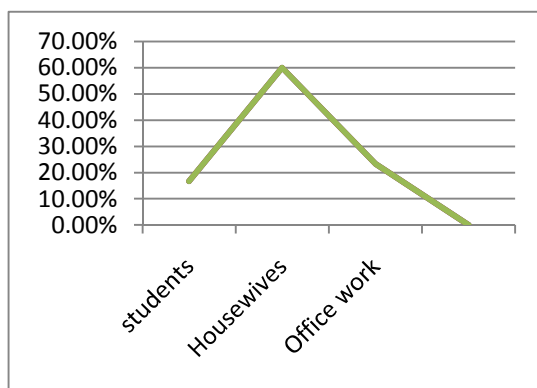**Age Distribution**



1)14 yrs to 20yrs = 5 patients = 16.66%

2) 20yrs to 30yrs = 7 patients = 23.33%

3)30yrs to 40yrs = 4 patients = 13.33%

4) 40yrs to 50 yrs =14 patients =46.66%
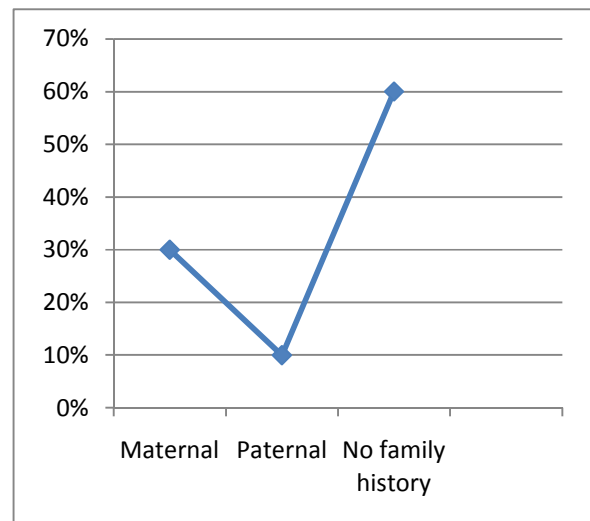
5)50 yrs to 60 yrs = 0 patients = 0%

**Occupation**



1)Students – 5 patients = 16.66%

2)Housewives -  18patients = 60%

3)Office work – 7 patients =23.33%

**Family history**



1)Maternal history – 9 = 30%

2)Paternal history -3 =10%

3) No family history = 60%

**Results**

1) *Navak Guggulu* and *Triphaladi udavartan churn* are very effective for the treatment of obesity.

2) It gave strength to patients with all respect.

3) These combinations have very good effect on dislipidemia and hence can reduce the risk of plague formation and its complications in further.

4) These combinations reduce the weight of patients of about 3kg after the course of 3 months.

5) This study also showed good results on obesity associated skin conditions.

Table 1: Showing significance of drugs on signs and symptoms

| Sl. no. | Signs and symptoms | x | S.D. | S.E. | T | P | Significance |
|---|---|---|---|---|---|---|---|
| 1. | *Sthulata* | 0.733 | 0.449 | 0.0819 | 8.94 | <0.001 | Highly significant |
| 2. | *Asamyak upachaya* | 0.267 | 0.449 | 0.0819 | 3.260 | <0.01 | Significant |
| 3. | *Duarbalya* | 1.33 | 0.434 | 0.0792 | 14.30 | <0.001 | Highly significant |
| 4. | *Duargandhya* | 1.3 | 0.815 | 0.1488 | 8.958 | <0.001 | Highly significant |
| 5. | *Swedadhikya* | 1.166 | 0.673 | 0.0224 | 5.1914 | <0.001 | Highly significant |
| 6. | *Atishudha* | 1.266 | 0.449 | 0.014 | 8.445 | <0.001 | Highly significant |
| 7. | *Atitrishna* | 1.033 | o.490 | 0.0163 | 6.337 | <0.001 | Highly significant |
| 8. | *Kshudrashwas* | 1.266 | 0.340 | 0.011 | 11.20 | <0.001 | Highly significant |
| 9. | *Swapnadhikya* | 1 | 0.525 | 0.017 | 5.714 | <0.001 | Highly significant |
| 10. | *Karma asahatwa* | 1.233 | 0.388 | 0.012 | 9.55 | <0.001 | Highly significant |

Table 2: Showing significance of Drug on BMI

| Sl. no. | | x | S.D. | S.E. | T | P | Significance |
|---|---|---|---|---|---|---|---|
| 1. | BMI | 1.223 | 0.652 | 0.119 | 10.26 | <0.001 | Highly significant |

Table 3: Showing significance of treatment on Aayam

| Sl.no. | | x | S.D. | S.E. | T | P | Significance |
|---|---|---|---|---|---|---|---|
| 1. | *Stan-Aayam* | 2.55 | 2.368 | 0.432 | 5.89 | <0.001 | Highly significant |
| 2. | *Udar-Aayam* | 2.35 | 1.791 | 0.327 | 7.18 | <0.001 | Highly significant |
| 3. | *Nitamb Aayam* | 2.33 | 1.609 | 0.293 | 7.93 | <0.001 | Highly significant |
| 4. | *Bahu-Aayam* | 1.1 | 0.656 | 0.119 | 9.17 | <0.001 | Highly significant |

## DISCUSSION AND CONCLUSION

Obesity is a *Santarpanottha* disease. Excessive eating, minimum physical activities, day time sleep (excessive sleep) and happy life are the key factors in etiopathogenesis.

Today the disease is commonly seen in young adults and elderly patients. As it is seen in young adults, the affected generation is seen with morbidities and co-morbidities. In this present study it is seen that this disease has very bad impact on the social, economic, sexual and physical life of patients. In days to come the prevalence of this disease may go on increasing which will produce morbid generations in near future.

The excessive eating of sweet items and unctus diet have bad impact on *Jatharagni*. It becomes less active (*manda*). Due to *mandagni* very first *dhatu* "*Rasa*", is not produced as *"Sara" dhatu* which leads to production of "*Ama*", which covers the internal lining of all *srotasas*, which results in blockages of the opening of the other *srotasas* in *mahasrotas*. Hence *vata dosh* is arrested in *mahasrotas*, which stimulates the *Jatharagni* and patient may have aggravated *kshudha*, which results in excessive eating and a viscious cycle goes on.

As it was open uncontrolled trial, patients of age group 14-50 were included in this trial. They took the treatment according to the protocol of the trial. Duration of three months was adequate to see the effect of *Navak Guggulu* along with *udavartan*, because almost all patient have lost their weight around 3 kg. This is proved to be significant, when the test of significance "p" was applied to the study. All the patients got significant relief in all the symptoms after the treatment. Patients could give up heaviness, excessive sweating, difficulty in sexual act, excessive hunger, dyspnoea, etc. At the other hand they felt energetic during and after the treatment. Application of *udavartan churna* daily made the patients work efficiently for whole day. It made them fill fresh and enthusiastic. Application of

*Udavartan churna* has additional benefit for the skin to glow.

Taking medicine with honey was very easy for all the subjects. Hence discontinuance of the trial before the prescribed duration was not observed, hardly there was anybody to do so. Application of *udavartan churn* at the time of bath was very convenient and hence they became habitual for the *udavartan kriya.* Patients were asked to visit weekly to o.p.d. of Shree Saptashringi Ayurved College and hospital. Every time patients were examined for weight, skin fold thickness, waist circumference, hip circumference, etc. B.M.I. was calculated regularly, and record was kept. Before and after the trial the pathological investigations were done. Record of C.B.C. E.S.R. URINE – R/M, Lipid profile, Blood sugar levels- f& pp, T3,T4,TSH, Sr. creatinine , Bl. Urea was kept before and after the trial. There were 13 subjects who showed raised sr. cholesterol and LDL before the trial, after the completion of trial they showed significant changes in the levels, hence the use of *Navak Guggulu* with *udvartan* is effective to control dyslipidimia.

During this trial patients were carefully observed and examined for adverse effects of the drugs. But no any subjects under trial showed any adverse effects and reactions. Hence internal administration of *Navak Guggulu* and external application of *udavartan churna* is very safe and effective for all the subjects for all the time.

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