ISSN: 2322 - 0902 (P)
ISSN: 2322 - 0910 (O)

International Journal of Ayurveda and Pharma Research

Research Article

EVALUATION OF THE IMPACT OF *SAARA* W.S.R TO OBESITY AND ITS AYURVEDIC MANAGEMENT: A RETROSPECTIVE ANALYSIS

Barik Shawan[1]*, Grampurohit Pradeep L[2], Prasad Buduru S[3]

*[1]Assistant Professor, Department of Panchakarma, Institute of Post Graduate Ayurvedic Education & Research at Shyamadas Vaidya Shastra Pith, Kolkata, West Bengal.

[2]Professor and HOD, PhD, Department of Panchakarma, KLEU'S Shri BMK Ayurveda Mahavidyalaya, Department of Panchakarma, Shahapur, Belagavi, Karnataka.

[3]President, Board of Ayurveda, National Council of Indian System of Medicine (NCISM), New Delhi, India.

Article info

Article History:
Received: 19-01-2024
Accepted: 16-02-2024
Published: 05-03-2024

KEYWORDS:
Obesity, Body Mass Index, BMI, Ayurveda, *Saara*, Lipid Parameters, Retrospective analysis.

ABSTRACT

Obesity, the name itself causes a social as well as mental trauma for the individuals suffering from it. Although in the initial stage of the disease, the individuals overlook the problem, but later, it becomes the cause of much other upbringing disease. So the question arises, what is the cause of the sudden rise in obesity? Does it relate only to the lifestyle disorder or there is a genetic makeup in an individual, in which the tissues starts proliferating and storing adipose tissue, when it gets any favourable condition and environment. In Ayurveda, the genotype and the phenotype has been explained in the term of *Saara* (essence). Therefore an attempt has been made to understand the effect of *Saara*. **Materials and Methods:** 124 case papers diagnosed with obesity and had undergone any *Panchakarma* treatment at KLEU Shri BMK Ayurveda hospital, Belgaum, Karnataka, India. Complete before and after assessment of total cholesterol, HDL, LDL, triglyceride, circumference measurement, BMI, weight. **Result:** In *Medosaara* population and in *Mamsasaara* individuals, significant decrease observed in total cholesterol (3.76%) and mid- abdomen circumference (34.97%), and triglyceride (10.3%), LDL (6.52%), Mid-thigh circumference (7.36%), abdominal circumference (7.11%), and BMI (6.73%). **Conclusion:** The *Saara* of any individual determines the possible outcome of any disease, irrespective of the treatment the individual is undergoing. Therefore, in this study of obesity, it was concluded that *Medosaara* individuals has significant weight reduction from the baseline.

INTRODUCTION

Obesity, the name itself causes a social as well as mental trauma for the individuals suffering from it. Although in the initial stage of the disease, the individuals overlook the problem, but later, it becomes the cause of much other upbringing disease. Obesity has not only become the headache for the individual household but also the cause of depression in the Government Health Strategies[1]. The obese individuals need to be treated with both lifestyle interventions and/or pharmacological therapy.

Access this article online

Quick Response Code

https://doi.org/10.47070/ijapr.v12i2.3146

Unfortunately, drug treatment of obesity despite short-term benefits, is often associated with rebound weight gain after the stopping of drug use, side effects from the medication, and the potential for drug abuse. So the question arises, what is the cause of the sudden rise in obesity? Does it relate only to the lifestyle disorder or there is a genetic makeup in an individual, in which the tissues starts proliferating and storing adipose tissue, when it gets any favourable condition and environment. Although researchers worldwide has started the foundation for the gene expression of an individual, and has come to the conclusion that there is a recessive gene, which is induced an obesity linked pro-inflammatory gene expression[2] after the intake of high acid rich diet, but also open space for research parameters in the Ayurvedic science of life. Ayurveda, the science of life, which is around 2nd century BC, has expressed a number of causes in the development of an individual.

It also explains the individual make up of an individual[3]. The Ayurvedic science has explained the presence of *Dosha* (body humours), *Dhatu* (tissues) and *Mala* (metabolic waste) in the body and any chance in them changes the metabolism, leads to pathology. It has been said that, the essence of all the *Dhatus* (tissue) is *Saara*, which is responsible for the selective pathology or the well-being of any individual. The physical entity of the human body like the *Saara Pariksha* are also done to rule out an individual's *Prakriti* (natural constituents)[3,4]. These parameters help in the determination of an individual's body phenotype and genotype. There are seven type of *Saara* (essence) of the human body, i.e., *Rasasaara*, *Raktasaara*, *Mamsasaara*, *Medosaara*, *Asthisaara*, *Majjasaara*, and *Sukrasaara*. The body type having the essence of *Medosaara*, *Mamsasaara*, and *Majjsaara* has a natural tendency to gain weight and are bulky in nature[3]. Although the *Saara* of the body determine the phenotype of the individual but it also in its *Dushti* condition, more adverse condition is seen.

AIM AND OBJECTIVE

To evaluate the effect of *Saara* with respect to obesity and Ayurvedic management.

MATERIALS AND METHODS

A retrospective analysis of case papers of 124 subjects diagnosed with obesity, who had undergone any *Panchakarma* treatment course at KLEU Shri BMK Ayurveda hospital without any complications and the clinical details are complete in all aspect including availability of lipid profile estimation reports, circumference measurement, BMI[5], weight, before and after are included in the study. Institutional Ethical Clearance was taken for the study and after obtaining the consent the study was conducted.

Diagnostic Criteria

1. BMI > 25
2. Total cholesterol
3. HDL
4. LDL
5. Triglyceride

Inclusion Criteria

1. Case papers complete in all aspects
2. Subjects of either sex aged between 18 to 70 years

Exclusion Criteria

Subjects with any major systemic disorder.

Investigation

- Total Cholesterol
- HDL
- LDL
- Triglyceride

Intervention

- The subjects were given *Sarvanga udwartana* for duration of 30 minutes, which was minimum of 3 days and maximum of 5 days.
- The *Udwartana* powder consisted of *Triphala* powder of mesh size 120.
- Followed by minimum of three days of *Snehapana* with *Murchita tila taila* and maximum of five days or till the achievement of *Snehana Samyak Shuddhi lakshana*.
- During *Vishrama kala*, the subjects were then given three days of *Sarvanga abhyanga* with *Murchita tila taila* for 20 minutes followed by *Baspa Sweda* as per their tolerability.
- On the fourth day of *Vishrama kala*, after *Sarvanaga abhyanga* and *Baspa Sweda*, the subjects were given *Virechana karma* with *Trivrut lehya* with *Ushna jala*, dose depending as per their *Koshtha*.
- After *Virechana karma*, *Samsarjana krama* was advised as per their *Vegas*.

Assessment Criteria

The assessment of the disease was based on the following objective parameters:

Objective Parameters

- BMI [5]
- Body weight [5]
- Total cholesterol
- HDL
- LDL
- Triglyceride

Lipid Parameter Grades	Desirable	Borderline	High risk
Cholesterol	<200mg/dl	200-239mg/dl	240mg/dl
Triglycerides	<150mg/dl	150-199mg/dl	200-499mg/dl
HDL	60mg/dl	35-45mg/dl	<35mg/dl
LDL	60-130mg/dl	130-159mg/dl	160-189mg/dl

OBSERVATION AND RESULT

In this study, it was observed that, the overweight population is dominated by *Majjasaara purusha* (Table 1), both Type- I and Type–II obese population is dominated by *Mamsasaara purusha* (Table 2 and table 3), while Type- III obese population is pre-dominant of *Medosaara* and *Majjasaara purusha* (Table 4) equally. It was also observed that the female population is nearly equal in both the categories of *Mamsasaara* (36) and *Majjasaara* (35), while that of male population is mainly *Majjasaara*. In *Medosaara purusha*, it has been observed with respect to lipid profile that, it reduces triglycerides (4.97%) effectively

followed by total cholesterol (3.76%) (Table5). Whereas the most effective area reduced in these populations is mid-abdomen circumference (34.97%) (Table 6). In *Mamsasaara* population it was observed that the maximum decrease was seen in triglyceride levels (10.3%) followed by LDL (6.52%) (Table 7). It was also observed that there is decrease in Mid-thigh circumference (7.36%) followed by abdominal circumference (7.11%), and followed by BMI (6.73%) (Table 8). In *Majjasaara* population, it was observed with respect to lipid profile, that both triglycerides and LDL has increased in the span of *Udwartana* (Table 9). LDL has increased by 8.86% while triglyceride has increased by 8.42%. It was also observed that there is noteworthy decrease in mid-arm circumference in *Majjasaara purusha* (12.84%) (Table 10).

Table 1: *Saara* & Overweight

Parameters	Total	Male	Female
Medosaara	8	4	4
Mamsasaara	8	4	4
Majjasaara	34	14	20

Table 2: *Saara* & Type I obese

Parameters	Total	Male	Female
Medosaara	6	0	6
Mamsasaara	28	7	21
Majjasaara	15	5	10

Table 3: *Saara* & Type II obese

Parameters	Total	Male	Female
Medosaara	1	0	1
Mamsasaara	12	2	10
Majjasaara	5	1	4

Table 4: *Saara* & Type III obese

Parameters	Total	Male	Female
Medosaara	3	2	1
Mamsasaara	1	0	1
Majjasaara	3	2	1

Table 5: Lipid profile parameters w.s.r. to *Medosaara*

Parameters	BT	AT	BT-AT	% of Difference
Total cholesterol	148	142.43	5.57	3.76
HDL	45.25	44.62	0.63	1.39
LDL	94.37	92.5	1.87	1.98
Triglyceride	122	115.93	6.07	4.97

Table 6: Weight, BMI & circumference change w.s.r. to *Medosaara*

Parameters	BT	AT	BT-AT	% of Difference
Weight	86.75	82.68	4.07	4.69
BMI	33	30.98	2.02	6.12
Chest Circumference	42.26	40.42	1.84	4.35
Abdomen Circumference	42.11	39.23	2.88	6.83
Hip Circumference	46.23	44.25	1.98	4.28
Mid-Arm Circumference	19.73	12.83	6.9	34.97
Mid-Thigh Circumference	23.8	22.1	1.7	7.14

Table 7: Lipid profile parameters w.s.r. to *Mamsasaara*

Parameters	BT	AT	BT-AT	% of Difference
Total cholesterol	177.86	168.72	9.13	5.13
HDL	52.93	50.75	2.18	4.11
LDL	95.68	89.44	6.24	6.52
Triglyceride	172.27	154.51	17.76	10.3

Table 8: Weight, BMI & circumference change w.s.r. to *Mamsasaara*

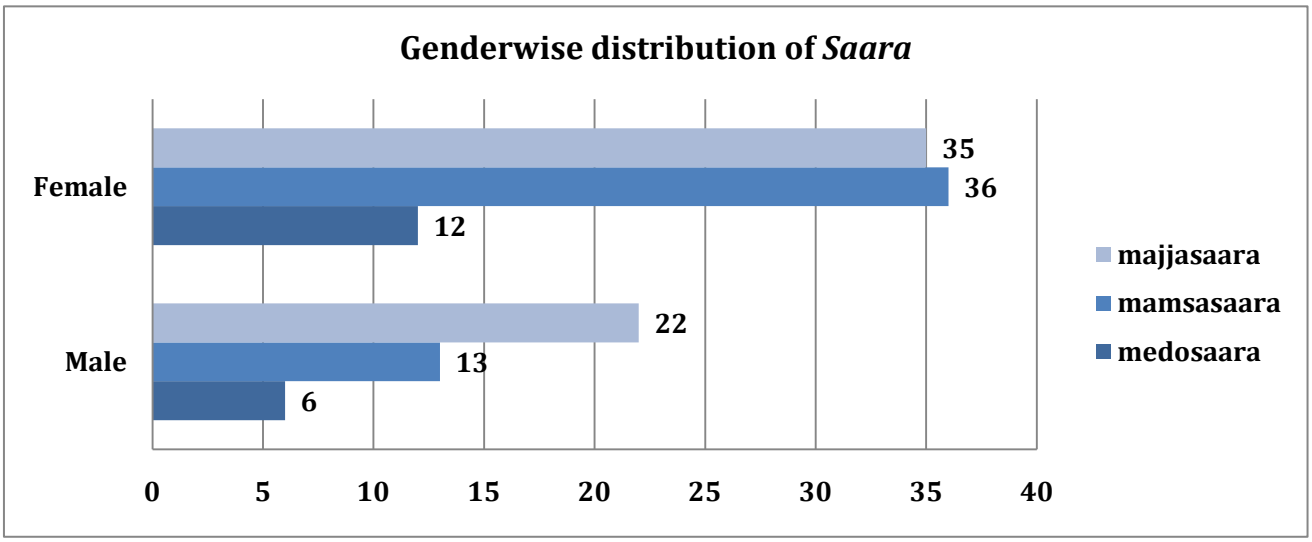
Parameters	BT	AT	BT-AT	% of Difference
Weight	79.59	78.53	1.06	1.33
BMI	32.37	30.19	2.18	6.73
Chest Circumference	39.82	37.92	1.9	4.77
Abdomen Circumference	42.42	39.4	3.02	7.11
Hip Circumference	47.67	44.89	2.78	5.83
Mid-Arm Circumference	13.48	13.02	0.46	3.41
Mid-Thigh Circumference	24.44	22.64	1.8	7.36

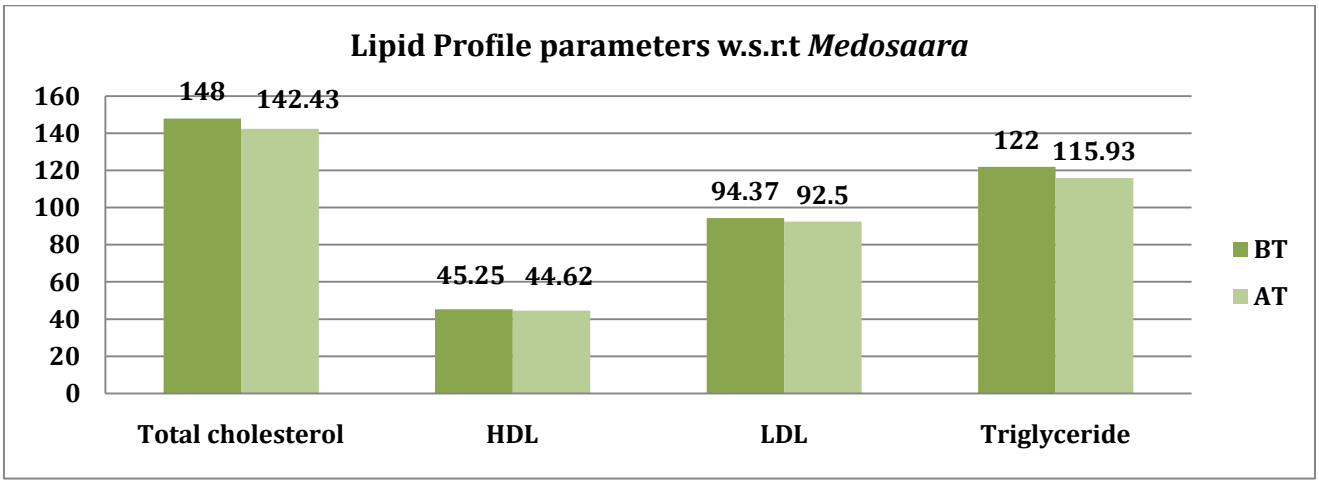
Table 9: Lipid profile parameters w.s.r. to *Majjasaara*

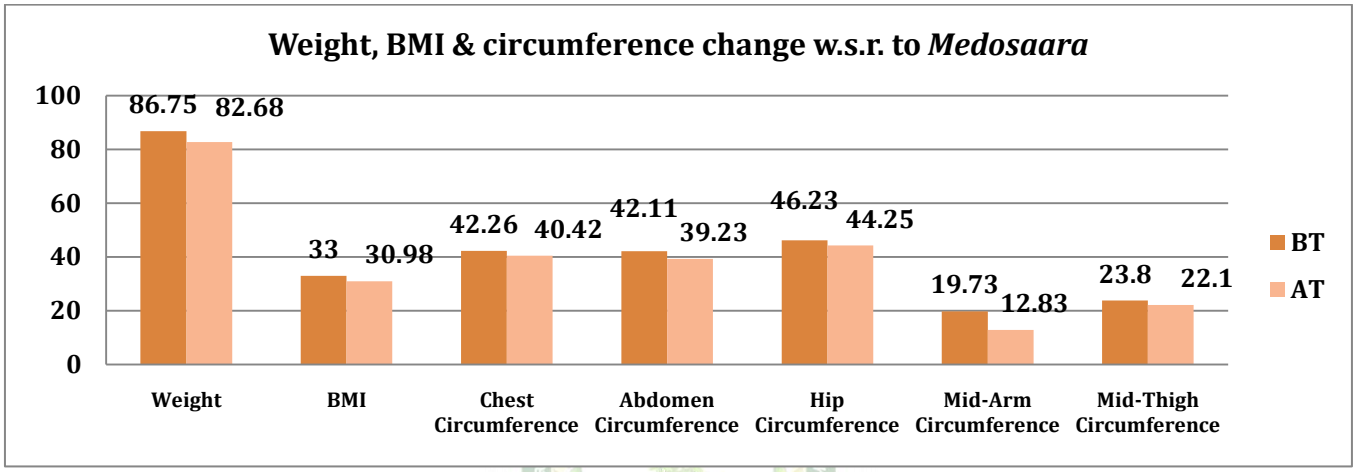
Parameters	BT	AT	BT-AT	% of Difference
Total cholesterol	137.51	134.65	2.86	2.07
HDL	55	54.65	0.35	0.63
LDL	76.4	83.17	-6.77	-8.86
Triglyceride	91.29	98.98	-7.69	-8.42

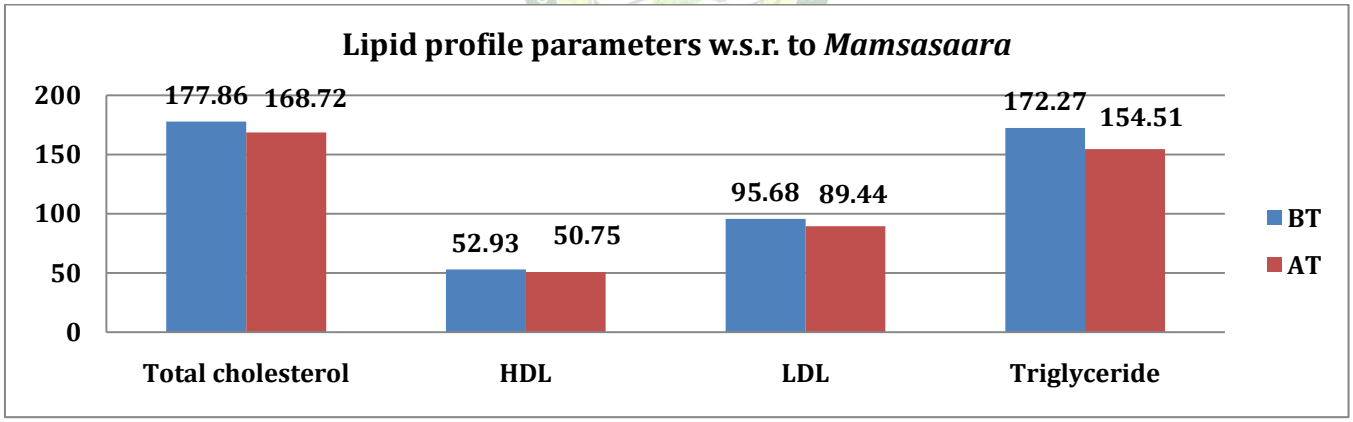
Table 10: Weight, BMI & circumference change w.s.r. to *Majjasaara*

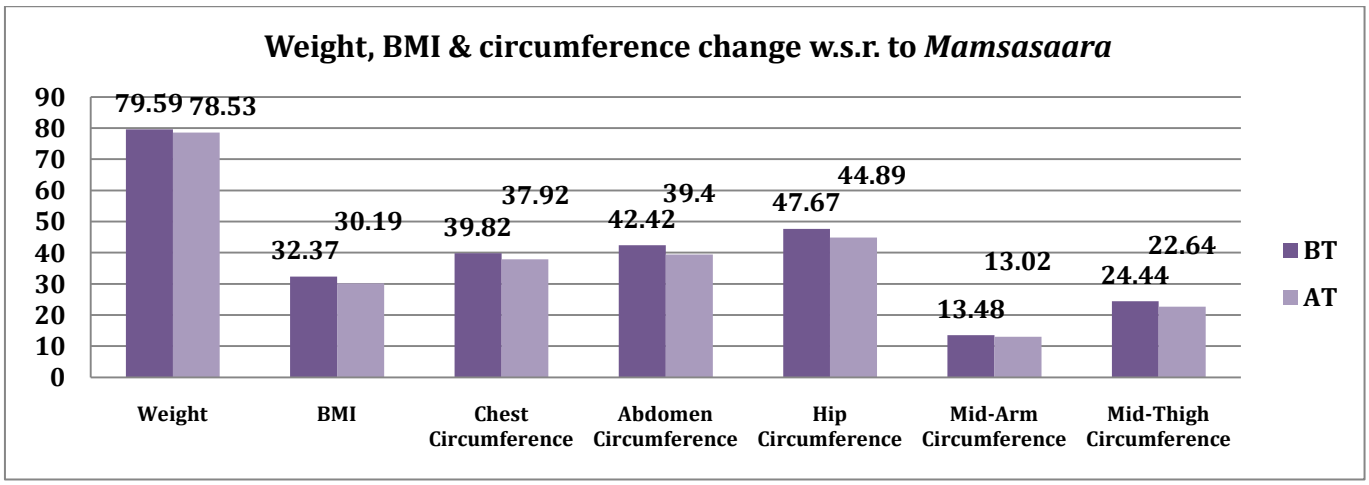
Parameters	BT	AT	BT-AT	% of Difference
Weight	77.02	74.75	2.27	2.94
BMI	31.03	29.66	1.37	4.41
Chest Circumference	38.73	37.37	1.36	3.51
Abdomen Circumference	39.75	38.11	1.64	4.12
Hip Circumference	44.97	42.66	2.31	5.13
Mid-Arm Circumference	14.09	12.28	1.81	12.84
Mid-Thigh Circumference	22.47	21.28	1.19	5.29

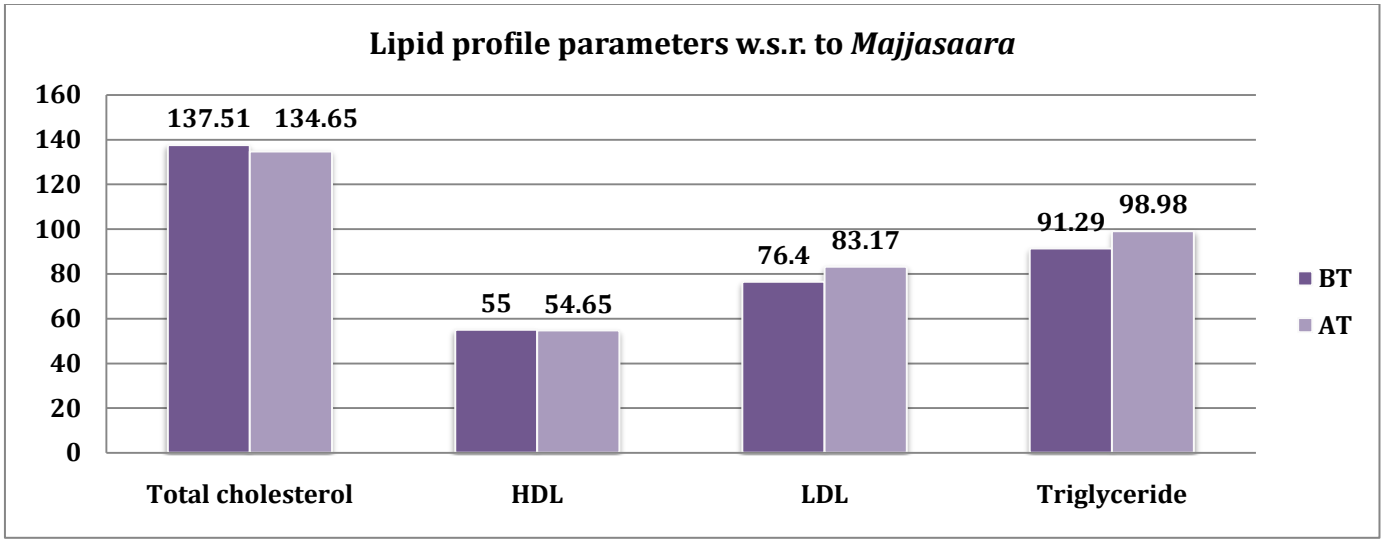


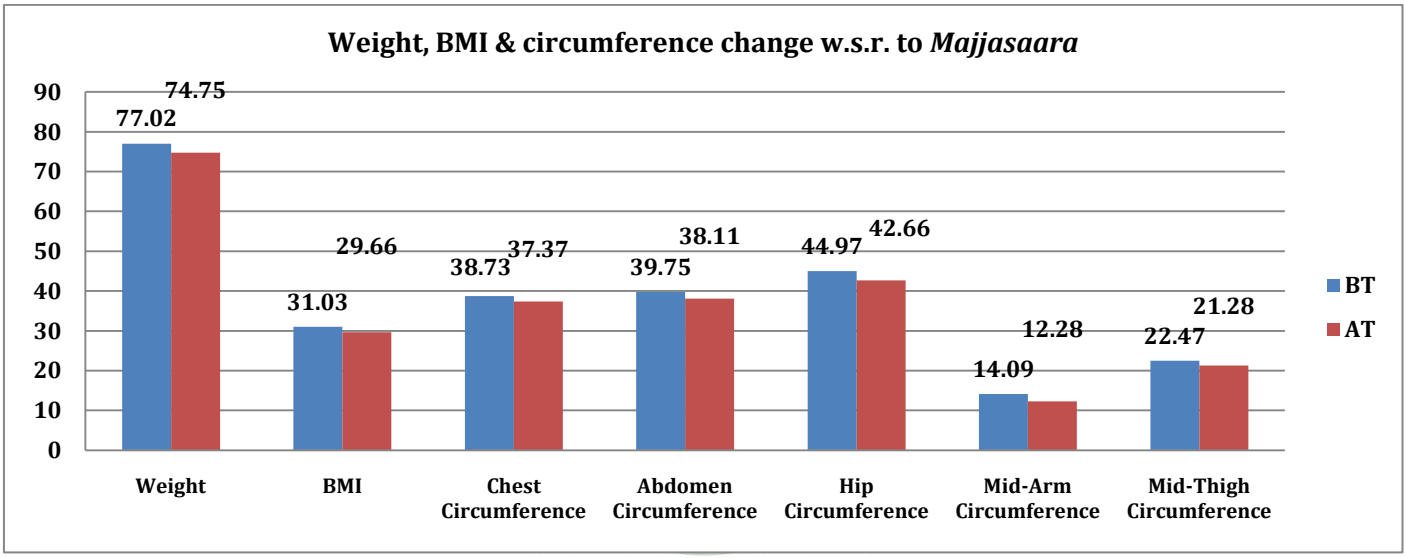

Lipid Profile parameters w.s.r.t *Medosaara*
160
140
120
100
80
60
40
20
0
148
142.43
45.25
44.62
94.37
92.5
122
115.93
Total cholesterol
HDL
LDL
Triglyceride
BT
AT


Weight, BMI & circumference change w.s.r. to *Medosaara*
100
80
60
40
20
0
86.75
82.68
33
30.98
42.26
40.42
42.11
39.23
46.23
44.25
19.73
12.83
23.8
22.1
Weight
BMI
Chest Circumference
Abdomen Circumference
Hip Circumference
Mid-Arm Circumference
Mid-Thigh Circumference
BT
AT


Lipid profile parameters w.s.r. to *Mamsasaara*
200
150
100
50
0
177.86
168.72
52.93
50.75
95.68
89.44
172.27
154.51
Total cholesterol
HDL
LDL
Triglyceride
BT
AT


Weight, BMI & circumference change w.s.r. to *Mamsasaara*
90
80
70
60
50
40
30
20
10
0
79.59
78.53
32.37
30.19
39.82
37.92
42.42
39.4
47.67
44.89
13.48
13.02
24.44
22.64
Weight
BMI
Chest Circumference
Abdomen Circumference
Hip Circumference
Mid-Arm Circumference
Mid-Thigh Circumference
BT
AT





DISCUSSION

Ayurveda, the science of life, explained the genetic *makeup* of the body as *Prakriti*, where each individual is predetermined with his set of disease, wellbeing and immunity. The *Prakriti* of an individual is determined at the time of conception; hence it does not lie in the hand of anyone to change the basic makeup[6]. Saying this, it was also seen that *Saara* (essence) of each individual differ, to some extend it is dependent on the *Prakriti* of a person. The *Saara* of an individual also cannot be changed, it makes the genotype of the individual, depending upon which has whole life circles [6]. Although our body is made up of seven *Saara*, but the dominant *Saara* leads the forefront [7]. It was also explained by the *Acharyas* that *Sukrasaara* which is said to be the essence of all the *Saara* itself, is the best *Saara*, with longevity, prosperity and sincerity[8]. In this study, it was observed that the *Majjasaara* is more dominant in the female population, also leading to overweight and Type- I obesity, due to the more compactness of the *Majja dhatu* leading to well defined bone and its structure in the body. The decrease or increase in lipid profile with respect to *Saara* of an individual was observed that, the individuals with *Mamsasaara* has the highest decrease in values, while that of *Majjasaara*, it was seen that, the lipid value of LDL and triglyceride has increased from its previous baseline, it may be due to the fact, that the *Majjasaara* individuals may have a high increase in the lipid values, constituently due to their well-defined long and rounded joints, *Mridu anga* (softness of organs), strength, *Snigdhata* (unctuousness) of *Varna* (complexion) and *Swara* (voice) [9]. It was also observed that the *Medosaara* individual has the highest difference in decrease of weight and mid-arm circumference, followed by *Majjasaara* individual, it may be due to their natural tendency to gain weight, and by external *Panchakarma* therapy, these additional weight has been reduced effectively [10]. The *Saara* of any individual is important in the Ayurvedic parameters as it determines the individual ability, strength and tolerance of any situation [11]. It is the same reason, when an extreme emaciated person can bear the work load or two individual whereas, a well-nourished person cannot even tolerate a heated argument [12].

CONCLUSION

The *Saara* of any individual determines the possible outcome of any disease, irrespective of the treatment the individual is undergoing. Therefore, in this study of obesity, it was concluded that *Medosaara* individuals has significant weight reduction from the baseline.

Acknowledgement: KLEU Shri BMK Ayurveda hospital, Belgaum, Karnataka, India.

REFERENCES

1. Novak NL, Brownell KD. Role of policy and government in the obesity epidemic. Circulation. 2012 Nov 6; 126(19): 2345-52.
2. Van Dijk SJ, Feskens EJ, Bos MB, Hoelen DW, Heijligenberg R, Bromhaar MG, de Groot LC, de Vries JH, Müller M, Afman LA. A saturated fatty acid–rich diet induces an obesity-linked proinflammatory gene expression profile in adipose tissue of subjects at risk of metabolic syndrome. The American journal of clinical nutrition. 2009 Dec 1; 90(6): 1656-64.
3. Agnivesha, Charak Samhita, Sharma R.K, Vaidya Bhagwan Dash, Sutra Sthana, Astaninditya *purusha*, sthoulya, volume-I, Chaukhambha Sanskrit series Office, Varanasi, Reprint: 2008, chapter 21, verse-4, 374-376p
4. Agnivesha, Charak Samhita, Yadav Sharma, pratham bhag, Vimana Sthana, Roga-visagjatiya viman *Saara* pariksha, Chaukhambha Orientalia, Reprint Edition: 2011, Jamnagar Edition, Varanasi, 692p-693p
5. WHO, South East Asia, BMI chart, revised, 2007
6. Agnivesha, Charak Samhita, Sharma R.K, Vaidya Bhagwan Dash, Sutra Sthana, Astaninditya *purusha*, sthoulya, volume-I, Chaukhambha Sanskrit series Office, Varanasi, Reprint: 2008, chapter 21, verse-16-17, 374-376p
7. Agnivesha, Charak Samhita, Sharma R.K, Vaidya Bhagwan Dash, Sutra Sthana, Astaninditya *purusha*, sthoulya, volume-I, Chaukhambha Sanskrit series Office, Varanasi, Reprint: 2008, chapter 21, verse-4, chakrapani teeka, 374-376p
8. Agnivesha, Charak Samhita, Sharma R.K, Vaidya Bhagwan Dash, Chikitsa Sthana, volume-IV, Chaukhambha Sanskrit series Office, Varanasi, Reprint: 2008, chapter 24, verse-52-53, 374-376p
9. Agnivesha, Charak Samhita, Sharma R.K, Vaidya Bhagwan Dash, Viman Sthana, volume-II, Chaukhambha Sanskrit series Office, Varanasi, Reprint: 2008, chapter 8, verse-108, 269p
10. Agnivesha, Charak Samhita, Sharma R.K, Vaidya Bhagwan Dash, Viman Sthana, volume-II, Chaukhambha Sanskrit series Office, Varanasi, Reprint: 2008, chapter 8, verse-96, 263p
11. Agnivesha, Charak Samhita, Sharma R.K, Vaidya Bhagwan Dash, Viman Sthana, volume-II, Chaukhambha Sanskrit series Office, Varanasi, Reprint: 2008, chapter 8, verse-115, 271p
12. Agnivesha, Charak Samhita, Sharma R.K, Vaidya Bhagwan Dash, Viman Sthana, volume-II, Chaukhambha Sanskrit series Office, Varanasi, Reprint:2008, chapter 8, verse-118, 272p

Cite this article as:
Barik Shawan, Grampurohit Pradeep L, Prasad Buduru S. Evaluation of the Impact of Saara w.s.r to Obesity and Its Ayurvedic Management: A Retrospective Analysis. International Journal of Ayurveda and Pharma Research. 2024;12(2):64-70.
https://doi.org/10.47070/ijapr.v12i2.3146
Source of support: Nil, Conflict of interest: None Declared

***Address for correspondence**
Dr. Barik Shawan
Assistant Professor,
Department of Panchakarma,
Institute of Post Graduate Ayurvedic Education & Research at Shyamadas Vaidya Shastra Pith, Kolkata, West Bengal, India.
Email:
drshawanbarik88@gmail.com