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COMPARATIVE STUDY OF THE EFFECT OF PHYSICAL EXERCISE AND YOGA PRACTICES IN OBESE CHILDREN

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ABSTRACT

Obesity is one of the killer disease among NCDs. Incidence of obesity is increased in children too. Yoga & physical exercise helps to overcome this. Method-In our study 20 obese children of age group 10 to 16 years of either sex select randomly in two groups. One group advised yogasana (pashchimottanasana, bhujangasana, shalabhasana) for one month and another group advised physical exercise (situps & running) for one month about 45 minute daily. All participants were assessed before & after. Parameters were used to assess is BMI & w/h ratio.

KEYWORDS: Obesity, pashchimottanasana, bhujangasana, shalabhasana, physical exercise.

INTRODUCTION

Obesity and overweight have become a worldwide epidemic and there is an urgent need to prevent and control childhood obesity and overweight.

Yoga is a science practiced in India over thousands of years. It produces consistent physiological as well as psychological changes which have sound scientific basis. Yoga provides one of the best means of self-improvement and gaining full potential of one's body, mind and soul. It has been proved beyond doubt that pranayama and certain yogasana are a very important means for preventing and curing many ailments. Over the last 10 years

research studies have shown that the practice of yoga improve strength and flexibility and may help in prevention and control of life style disorders such as obesity, hypertension etc.

INCLUSION CRITERIA

Young patients either sex of age group 10-16 years suffering from obesity or prone to obesity.

EXCLUSION CRITERIA

Patients suffering from any other major diseases.

Selection of patients and duration of study

In this study 20 patients were randomly included after screening by inclusion and exclusion criteria. Group-1 is the study group for evaluation of the effect of yoga-asanas in addition to the dietary and other lifestyle modification. Group-2 was given instruction on dietary and lifestyle modification was asked to do physical exercise (sit up and running) and not yogasanas.

Various parameters on demographic and clinical data for these diseases were recorded at the start of the study, the clinical data again recorded at the end of study period of one month for comparison.

METHOD

Certain selected yogasanas such as pashchimottanasana, bhujangasana, shalabhasana for group-1 and physical exercise such as 25 sit ups and fast running up to 2 kilometers for group-2 were conducted daily morning at about 6 am for 45minutes.

OBSERVATIONS AND DISCUSSION

Table 1: difference of BMI of group-1 before & after study

Mean AT-BT difference	SD AT-BT difference	SE AT-BT difference	'p' value	't' value
0.41	0.4372	0.1382	0.0267	2.644

P<0.05 significant

Table 2: difference of BMI of group-2 before & after study

Mean AT-BT difference	SD AT-BT difference	SE AT-BT difference	p value	t value
1.6	0.4091	0.1293	<0.0001	10.99

P<0.05 significant

Table 3: difference of w/h ratio of group-1 before & after study

Mean AT-BT difference	SD AT-BT difference	SE AT-BT difference	p value	t value
0.055	0.0429	0.0135	-0.0174	2.905

P<0.05 significant

Table 4: difference of w/h ratio of group-2 before & after study

Mean AT-BT difference	SD AT-BT difference	SE AT-BT difference	p value	t value
0.03	0.0427	0.0135	-0.051	2.25

P<0.05 significant

BMI

In this study the mean of BMI BT (before treatment) is 24.39 & AT (after treatment) is 23.97 for group-1 and p value is 0.0267 which is <0.05 it means that there is significant reduction in BMI for group-1.

In group-2 the mean of BMI before treatment is 24.42 & after treatment is 22.83 and p value <0.0001 it proves that there is significant reduction in BMI.

Waist & hip ratio

In group-1 the mean of waist hip ratio before treatment is 0.955 & after treatment is 1.01 and p value is -0.0174 which is significantly increase in waist hip ratio.

In group-2 the mean of waist hip ratio before treatment is 0.98 & after treatment is 1.01 and p value is -0.051 which is >0.05 it means that there is no significantly increase in waist hip ratio.

In this study p value of group-1 is greater than that of group-2 for BMI. It means there is mark reduction in BMI for group-2 than group-1 and p value of group-1 is less than that of group-2 for waist hip ratio. It means there is mark increase in waist hip ratio for group-1 than group-2.

RESULT

The result indicates decrease BMI in both group but magnitude was more in physical activity group and waist hip ratio increase significantly only in yoga group.

CONCLUSION

Yoga practice overcomes central obesity more rapidly than physical activity.

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