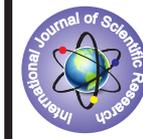


EFFECTIVENESS OF VEGETARIAN DIET TO MEET UP NUTRITIONAL DEMANDS OF THE PATIENTS IN POST BARIATRIC STAGE: CLINICAL STUDY DONE IN INDIAN GOVERNMENT HEALTH SETUP LUCKNOW, INDIA



Gastroenterology

KEYWORDS: vegan diet, dietary recall method, mediterranean diet, post bariatric regime

Pandey A.

Gastro, Laparoscopic & Metabolic Surgeon, Professor, MS, FIAGES, FAIS, FMAS, FLCS, (SGRH, New Delhi), Surgical Gastroenterology, Dr. Ram Manohar Lohia Institute of Medical Sciences, Gomti Nagar, Lucknow, Uttar Pradesh, India,

Tiwari P.

Dietician (Registered Dietician, PGDD,M.Sc.), Department of Dietetics, Dr. Ram Manohar Lohia Institute of Medical Sciences, Gomti Nagar, Lucknow, Uttar Pradesh, India,

Masood S.

Associate Professor, MBBS, MS, MCH, Gastrosurgeon, Surgical Gastroenterology, Dr. Ram Manohar Lohia Institute of Medical Sciences, Gomti Nagar, Lucknow, Uttar Pradesh, India

Chauhan S.

Assistant Professor, MBBS, DNB, Gastrosurgeon, Surgical Gastroenterology, Dr. Ram Manohar Lohia Institute of Medical Sciences, Gomti Nagar, Lucknow, Uttar Pradesh, India

ABSTRACT

The main objective of this study was to find out the efficacy of vegetarian diet so as to meet the protein requirement of the patients in post bariatric phase in comparison to non-vegetarian diet and to find out food items in conventional vegetarian diet responsible for weight gain. Out of 30 samples 18 were vegetarians and 12 were non-vegetarians. Their 24 hrs dietary intake recall showed that their restricted caloric requirement was fulfilled through post bariatric suggested dietary regime. Vegetarian dietary pattern such the traditional food habits of the study locale were found to be responsible for weight gain problems. Use of dalda etc. came out to be the major reasons. In post Bariatric phase the vegetarian protein options easily affordable by the patients were found less as compared to the non-vegetarian source, the reason being that whole grams and pulses such as Bengal gram, soyabean granules etc were causing gastric problem in post bariatric phase. Jau chana sattu came out to be the very effective option in the vegetarian diet of this region

INTRODUCTION

Obesity is no longer a matter to be discussed in general dimensions, rather it has become an alarming problem as various studies support that obesity is a package of co-morbidities and diseases like hypertension, cardiac problem, joint pain etc. More than 64 million people globally are now obese and the world has more overweight people than underweight people. India is also facing this problem in forefronts; it seems ironical that a country like India where 270 million people are in underprivileged category, still it is just behind US and China in terms of obese population.

Bariatric surgery is coming up as most effective therapy to treat the morbid obesity cases and to reduce the complications of morbid obesity. Bariatric surgery call for the comprehensive care and life long commitments to follow a restricted post bariatric dietary regime which carefully monitors the quantity as well as the quality of the food prescribed.

Seeing the results of Mediterranean Diet and Vegan diet, the leading causative factors for obesity through diet use to be the Non-vegetarian food items, such as mutton, organ meats, cheese, cream, butter etc. Surprisingly obesity is found more in population with vegetarian eating habits in the study region.

Over nutrition is not only confined to the intake of fat rich foods but quantity wise increase in the intake of street foods and less preferred Healthy food are also the cause for increasing obesity problem.

Present study was done in Bariatric unit of Surgical Gastroenterology Department Headed by Dr. Anshuman Pandey, at Dr. Ram Manohar Lohia Institute of Medical Sciences, Lucknow. The Clientele approaching to this department comprised mostly of middle and lower middle income group.

The samples selected for the present study were mostly Vegetarian.

Therefore in the following study below stated objectives were considered.

- Efficacy of vegan diet so as to meet the protein requirement of the patients in post bariatric phase in comparison to non-vegetarian dietary sources.
- To find out food items in conventional vegetarian diet responsible for weight gain.

Findings of this study will definitely help the future researches to have better understanding towards increasing problem of obesity in vegetarian as well as low income group population of the country.

METHODOLOGY

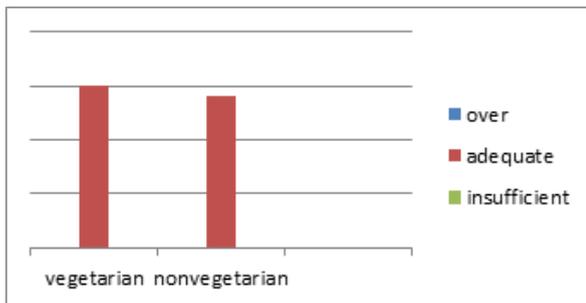
In the present study the OPD patients and patients referred by other department were taken in to the Bariatric Clinic under the leadership of Gastro Surgeons, the whole bariatric clinic team comprised of Trained Dietician, Clinical Psychologist.

The sample Size of the present study was 30 and the time period was of One year.

The patient's assessment was done at two stages namely Pre Bariatric phase and Post Bariatric Phase. In both the phase all aspects were intervened thoroughly and detailed investigations were done. From Dietician perspective assessment comprised of following categories

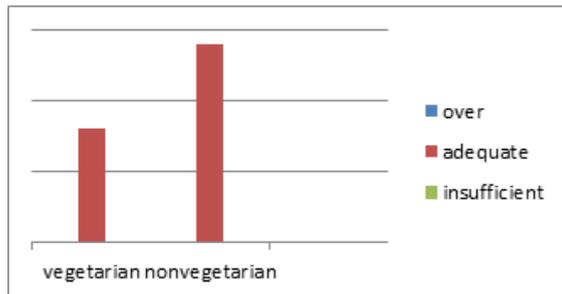
- Past clinical History and family history contributing to the morbid obesity.
- Socio economic background of the patients.
- Eating pattern of the whole family as well as the individual.
- Awareness of the patients about the changed eating patterns after the bariatric surgery.
- Anthropometric assessment of each individual pre surgery and post-surgery.(maximum 5 visits result were considered).
- Family support and his willingness to adhere to the post Bariatric regime and life style.

Inclusion Criteria for the study: although large number of patients got themselves enrolled in the Bariatric Clinic but only patients with BMI above 40 were considered suitable for the surgery.

RESULT

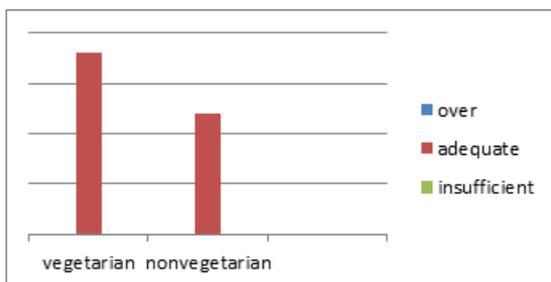
Figures: 1 Graphical representation of restricted caloric adequacy through vegetarian and non-vegetarian diet.

Out of 30 samples 18 were vegetarian and 12 were non-vegetarian .their dietary intake recall showed that their restricted caloric requirement was fulfilled through post bariatric suggested dietary regime.



Figures: 2 Graphical representation of protein adequacy through vegetarian and non-vegetarian diet.

The dietary intake recall of patients showed that protein options of vegetarian dietary patterns were not sufficient to meet the protein requirements of the post bariatric phase.



Figures: 3 Graphical representation of visible fat intake through vegetarian and non-vegetarian diet.

In the above graphical representation it is shown that the visible fat intake of vegetarian patients was more as compared to non-vegetarian patients.

CONCLUSIONS

The findings of the present study can be summarized in the following points.

- Vegetarian dietary pattern such the traditional food habits of the study locale were found to be responsible. For example addition of extra butter on the cooked food, inclusion of Malai and Paranthas, excess consumption of Potatoes as a cheaper vegetable. Use of dalda etc. came out to be the major reasons.
- In post bariatric phase the easily affordable protein sources in vegetarian diet were less as compared to the protein sources in non-vegetarian diet the reason being that whole grams and pulses such as Bengal gram, soyabean granules etc were causing gastric problem in post bariatric phase. Dals alone were not able

to meet the protein requirements although, Jau chana sattu came out to be the very effective option in this region.

- Government centers with trained Team of Bariatric surgeons, Dietician and Clinical Psychologist can tackle with this problem at ground level because patients found it cost effective and affordable. Thus it provides greater access to the middle income group obese population.

REFERENCES:

1. G. Srihari, A. Eilander, S. Muthayya, A.V. Kurpad and S. Seshadri. Nutritional Status of Affluent Indian School Children: What and How Much Do We Know? INDIAN PEDIATRICS 2007;44:204-213
2. Raj M. & Kumar R.K. Obesity in children & adolescents. Indian J Med Res 2010;132:598-607 Neetu Chandra Sharma
3. India the third most obese country in the world. A study published in the noted medical journal Lancet says India is just behind US and China in this global hazard list of top 10 countries with highest number of obese people.(in press)
4. Agrawal P. Role of Lifestyle and Diet in Emerging Obesity among Indian Women and its Impact upon their Health Status. International population conference 2005
5. Agrawal, P.K. 2002. Emerging obesity in Northern Indian States: A serious threat for health. Paper presented at the IUSSP Regional Conference, Bangkok, and June 10-13.