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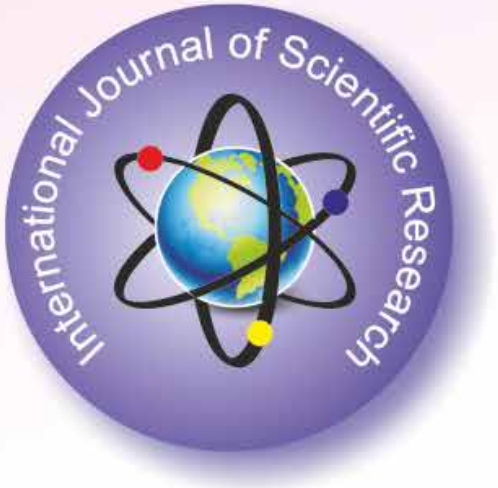

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Research Paper

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Preventive Modalities In The Management Of Obesity: A Review

Medical Sciences

KEYWORDS :Obesity, Diabetes, Anti-obesity Drugs

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ABSTRACT

Obesity is a global health problem resulting in morbidity and pre-mature death. Worldwide more than1.5 billion adults are overweight and more than 400 million are obese. According to an estimate more than 5% of the population in India is morbidly obese. Many genetic, environmental, behavioural and cultural factors affect health thereby leading to obesity, and its related complications like hypertension, diabetes mellitus II, coronary artery disease, osteoarthritis, and cancer gall bladder. Physicians therefore must confront obesity and its future consequences. Various approaches are being practiced in search for effective therapy to counteract obesity and the complications arising as a result of it. Behavioural interventions have formed the cornerstone of obesity treatment when combined with diet and exercise strategies producing weight loss of sufficient magnitude so as to reduce the health risks. This article reviews concepts regarding life style interventions, dietary modification, behavioural therapy and pharmacotherapy for the management of obesity and related complications. Present article also summarizes the benefits and limitations associated with each modality

Introduction

There is a rapidly escalating epidemic of obesity all over the world. India is under epidemiological transition. World's focus is changing from communicable to non communicable diseases (Kumar and Khan, 2012). Obesity is now considered more serious epidemic in the developing countries than developed countries. Obesity is a risk factor for non communicable diseases worldwide. India has controlled the problem of severe under nutrition to a substantial extent, but are now facing a rising epidemic of obesity. World Health Organization projects a worldwide disease burden of 5 billion overweight adults and 500 million obese adults by 2015. In India 5% of population is suffering from the burden of obesity. WHO recommendations for the diagnosis of obesity are based on BMI cut-offs. These cut-offs have been derived from data on increasing mortality and morbidity from diabetes, Coronary Heart Disease and stroke in developed countries (kg/m2): overweight 25.00, pre obese 25.00–29.99, obese class I 30.00–34.99, obese class II 35.00–39.99, obese class III 40.00 (Yagnik, 2004;WHO, 2006). As there has been a greater need for effective obesity treatments, academic medicine and the pharmaceutical industry have spent billions of dollars to identify and develop novel therapies to treat obesity. While there have been well-publicized drug failures, a number of candidate drugs are being researched (Field et al, 2010). This article summarizes various therapeutic modalities in management of obesity.

Lifestyle modifications including dietary restriction

Weight gain and obesity are promoted by excess calorie intake and sedentary lifestyle. Obesity can be managed by food intake restriction, exercise and behavioural modifications. Lifestyle interventions aim to increase the energy deficit and thereby promote weight loss. Such interventions continue to be the most successful nonsurgical treatment of obesity. Although a weight loss of up to 10% can be achieved using these approaches, poor adherence and rebound weight gain are significant problems (Wadden et al, 2007). Following treatment, patients typically regain 30% to 35% of their lost weight in 1 year. The other parameter to manage obesity is through hypo caloric diet which maintains energy intake less than 800 kcal/day. The more widely prescribed diets are summarized in table no 1. In order to improve adherence, it seems sensible to tailor the specific dietary composition to the patient's individual preferences.

Exercise therapy

Metabolic rate of an individual is directly proportional to the extent of physical activity done in daily routine. A sedentary lifestyle promotes weight gain and early mortality in adults (Katzmarzyk et al, 2009). Physical activity (moderate to vigorous) can help protect against the development of obesity and has beneficial effects on metabolism and body composition. It has been found difficult to reduce weight by exercise alone. Exercise can maintain weight loss after weight reduction. The American college of sports management recommends walking for ≥ 30 minutes per day, 5 to 7 days per week. For patients, general advice includes walking or cycling and using stairs whenever possible to promote physical activity.

Psychotherapy (Behavioural therapy)

Behavioural therapy aims to motivate obese patients to adhere to set guidelines to reduce and maintain the weight loss lifelong and to overcome poor and binge eating patterns and to promote physical activity. Behavioural therapy can improve initial weight loss and help maintain weight loss (Svetkey et al, 2008).The key strategies involved in behavioral therapy are summarized in table no 2.

Pharmacological treatment

Although more than 100 drugs have been investigated for Obesity in the last 25 years. Orlistat has been approved by the US Food and Drug Administration (FDA). Recent pharmacotherapies include Rimonabant, selective CB1 receptor antagonist and Sibutramine, Norepinephrine and 5-HT reuptake inhibitor. Both the drugs have been withdrawn from the market due to severe depression leading to suicides caused by Rimonabant and serious cardiovascular events and sudden deaths reported by Sibutramine (Li et al, 2005). Recent advances in drug development of obesity include drugs like Orlistat, Exenetide, Leptin, Cetilistat, Pramlintide, Liraglutide, Oxyntimodulin, Taranabant, Linagliptin and DPP-4 (dipeptide peptidyl) inhibitors etc. Each of the above drugs act by different mechanisms to reduce the gained weight with relative benefit more than risk (Padwal et al, 2004). Despite limited efficacy, pharmacological treatment can be recommended for the management of obese patients not responding to lifestyle interventions alone. The guidelines for the management of obesity recommend that pharmacotherapy to be considered for individuals with a BMI of ≥ 30 kg/m2 who have failed to achieve weight loss goals through diet and exercise alone. The recommendations should also be advocated to patients with a BMI of 27 to 29.9 kg/m2 and an obesity-related co-morbidity. The short-term treatment of obesity is defined as ≤ 3 months. Weight lost during short-term therapy is likely to be regained after the treatment is stopped at 3 months (Padwal et al, 2004; Bray and Ryan, 2007).

Conclusion

The increased prevalence of obesity highlights the need of programmes for its prevention focusing on calorie and nutrient intake, emotional and social cues related to food intake must be considered. During eleventh five year plan (2007-2012) period National Program for Prevention and Control of Diabetes, CVD and Stroke (NPCDCS) has been developed to prevent and control common NCDs risk factors. Health education programme that promotes exercise, weight reduction, early diagnosis, screening

are some of the key interventions that need to be promoted at various levels of heath facilities. Both preventive and curative strategies along with mobilization of additional resources are needed (Kumar and Khan, 2012). In order to prevent development of obesity in infants and toddlers there is increasing need for promoting breast-feeding in terms of percentage and duration; modifying wrong weaning patterns decreasing protein intake and increasing fat intake until 2 years of age; modifying toddler and school age children eating habit decreasing fat intake and increasing carbohydrates and fibres intakes; helping parents and/or guardians to understand the real needs of their children without using food as form of gratification, reward, and consolation for every negative feelings and situations; asking governments, consumer unions, food industries, and mass media to reduce and regulate non-nutritional food advertisings during children television time (Williamson et al, 1993). Therefore we can conclude that obesity is preventable disorder which can be controlled by detecting the factors leading to risk of obesity at individual level and by adhering to the compliance required to control it so that complications arising as a result of obesity be prevented.

Table 1: Diet considerations for the management of obesity

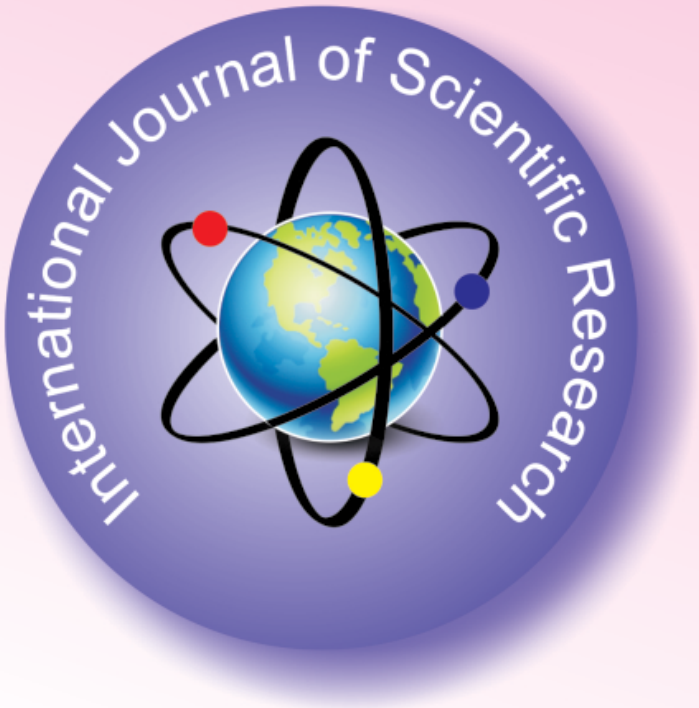
Type of Diet	Characteristic Features of Diet	Benefits and efficacy
Balanced (low-calorie diets)	Eliminate high-fat and sugar-containing foods and beverages.	
Portion-controlled food	Packaged structured calorie-controlled meal including fortified meal.	Achieve and maintain a 7-8% weight loss (Flechtner-Mors et al, 2000).
Low-fat food	Limits overall calorie consumption from energy-dense fats (20%–25%)	3-4 kg greater weight loss, as compared with normal-fat diets (Astrup et al, 2002).
Low-carbohydrate food	Limits carbohydrate consumption (protein and monounsaturated fats as main constituents)	Effective for short-term weight loss. Similar efficacy to low-fat diets for long-term weight loss in patients with insulin resistance and hypertension (Acheson, 2010).
Mediterranean food	Vegetables, fruits, legumes, and grains with a moderate consumption of dairy products.	Protects against risks associated with type 2 Diabetes, Hypertension, Cancers, and development of degenerative neurological disorders like Alzheimer's disease (Sofi et al, 2008).
Very low-calorie and starvation diets	Very low-calorie (200–800 kcal/day) and starvation (< 200 kcal/day) diets.	Short-term weight loss with significant difference in long-term weight loss as compared with conventional diets (Sofi et al, 2008). Poor adherence because of rapid weight regain after stopping same diet.

Table 2: Approaches for behavioral therapy for managing the obesity ((Svetkey et al, 2008)

General approaches for psychotherapy (behavioral therapy)	Activities involved
Self-assessment and stimulus control	Low calorie diet menu, food diaries and activity records. Control over environmental triggers for eating including stressors.
Goal setting	Weight loss goals up to a period of time.
Behavioural contracting and promoting reinforcement	Providing incentives for weight loss and rewarding successful outcomes.
Nutritional education	Dietary counseling to promote healthy and slow eating
Promoting physical activity	Encouraging exercise and promoting physical activity in daily routines
Social and cognitive support	By family members to help reinforce positive thinking.

REFERENCE

•Acheson, K.J. (2010). Carbohydrate for weight and metabolic control: where do we stand? Nutrition. 26(2):141–145. | •Astrup, A., Buemann, B., Flint, A., Raben, A. (2002). Low-fat diets and energy balance: how does the evidence stand in 2002? Proc Nutr Soc. 61(2):299–309. | •Bray, G.A., Ryan, D.H. (2007). Drug treatment of the overweight patient. Gastroenterology. 132(6):2239–2252. | •Field, B.C., Chaudhri, O.B., Bloom, S.R. (2010). Bowels control brain: gut hormones and obesity. Nat Rev Endocrinol. 6(8):444–453. | •Flechtner-Mors, M., Ditschuneit, H.H., Johnson. T.D., Suchard, M.A., Adler, G. (2000). Metabolic and weight loss effects of long-term dietary intervention in obese patients: four-year results. Obes Res. 8(5): 399-402. | •Katzmarzyk, P.T., Church, T.S., Craig, C.L., Bouchard, C. (2009). Sitting time and mortality from all causes, cardiovascular disease, and cancer. Med Sci Sports Exerc. 41(5):998–1005. | •Kumar, P., Khan, A.M. (2012). Epidemiological Transition and Emerging Conflicts in Health Care. GRA International, vol. 1, issue 1:96-97. | •Li, Z., Maglione, M., Tu, W., et al. (2005). Meta-analysis: pharmacologic treatment of obesity. Ann Intern Med.142(7):532–546. | •Padwal, R., Li, S.K., Lau, D.C. (2004). Long-term pharmacotherapy for obesity and overweight. Cochrane Database Syst Rev.(3):CD004094. |



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