

Level of knowledge about the effect of obesity on hypertension among the patients of Isfahan Oil Company Polyclinic, Iran

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Abstract

BACKGROUND: Hypertension is a chronic disease and is one of the complications of Obesity. Based on this serious complication and the importance of preventing hypertension, we decided to study the level of public knowledge about the effect of obesity on hypertension.

METHODS: The present study was conducted through simple random sampling (SRS) on 262 patients of Isfahan Oil Company Polyclinic, Iran. In order to collect the required data, we provided special questionnaires which were completed by the patients.

RESULTS: Most of the patients participating in our study were over 40 years of age (50%). The next largest age group consisted of 40-45 year olds (14%). The lowest educational status was high school diploma (41.3%), and 75.7% were married. 60.7% of the participants mentioned hypertension as a complication of obesity. 21.1% stated that hypertension is not a complication of obesity and 18.2% did not know.

CONCLUSION: Since public knowledge about the effect of obesity on hypertension is rather moderate, efforts to increase public knowledge and treat obesity are important in reducing the rate of patients with hypertension.

Keywords: Knowledge, Obesity, Hypertension

ARYA Atherosclerosis Journal 2012, 8(Special Issue in National Hypertension Treatment): S142-S144

Date of submission: 30 Jan 2012, *Date of acceptance:* 20 Jul 2012

Introduction

Obesity is a chronic disease, and is the most common disorder of lipid metabolism in humans.¹ The incidence and development of obesity is affected by different factors such as social, behavioral, cultural, physiological, metabolic and genetic factors.² Although, its history goes back to the Stone Age, overweight and obesity were considered as one of the main problems of health systems of countries after the industrialization of societies.¹ Existing evidences show an increasing rate of obesity following increased energy intake and low mobility, especially in urban communities.¹ On the other hand, hypertension is one of the most important risk factors for cardiovascular disease and the most common cause of heart failure in many countries.^{3,4}

In many cases the main cause of hypertension is unknown; however, some factors such as obesity may play a key role in this complication, in a way that the epidemic of obesity as a health problem in the

incidence of hypertension is increasing.³

Body mass index (BMI) is a criterion used today to assess obesity. According to the American Association of Nutrition, BMI equal to 25 is considered as overweight and over 30 as obesity. Health risk of obesity is related with its distribution; it is more severe in abdominal obesity.¹

Many clinical studies have shown that along with a decrease in body weight, blood pressure was significantly reduced.³

Preventive interventions are necessary from childhood due to the increasing prevalence of childhood obesity.⁵ It seems being aware of the complications of obesity may be considered as an effective factor in preventing its complications, including high blood pressure.

Materials and Methods

This study was carried out by using a questionnaire, the validity of which was obtained by the experts, and

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its reliability was calculated by Cronbach's alpha to be 0.52. The study populations were patients of Isfahan Oil Company Polyclinic. Samples were collected using simple random sampling (SRS).

A questionnaire was given to 262 patients who were referred to the clinic within a week.

The visitors were asked to answer the questions. Afterwards, the results were analyzed using SPSS software version 16 and descriptive statistics.

Results

The age range of the study population was from 18 to 40 years. The largest age group were over 40 years (50%). 75.7% were married, and 24.3% were single. Most of them were housewives (70.8%), and the highest level of education among them was high school diploma (41.3%). Among those with college degrees 81.5% had non-medical field of study (Table 1).

Among the study population 75.1% correctly identified obesity and 23.7% correctly identified overweight. Other individuals answered incorrectly or said they did not know. 84.6% of individuals mentioned diet therapy and change in physical activity as the treatment for obesity, 3.6% did not know, 7.5% mentioned only diet, and 4.3% only change in physical activity.

Discussion

Approximately 61% of surveyed individuals believed that blood pressure is a complication of obesity. In the study by Avazeh et al., 66.7% had knowledge about the prevention of cardiovascular disease.⁶ In the study by Barichella et al., 83.5% considered obesity to be a disease. 37.8% of the samples underestimated the role of physical activity in weight management. Moreover, only 17.2% of dieters (previous or current) declared they were advised by their doctor to lose weight.⁷ Rutkowski and Connelly showed that there is a relationship between obesity risk knowledge and physical activity levels in families of adolescents.⁸

In a study conducted by McGaffey et al. after an educational intervention, children's knowledge increased dramatically in specific areas, including the meaning of the term obesity and portion sizes.⁹ In the study by Simkhada et al. the subjects showed a good awareness about obesity. Some attitudes toward obese people were negative, however, half of the participants believed obesity to indicate prosperity. Furthermore, in their study, overweight and obesity was reported 8-9 times higher between married people and those who had better jobs.¹⁰ In the study by Al-Ghawi and Uauy 92% of participants were aware of the obesity epidemic and 60% felt capable of assuming a major role in obesity control, regardless of their negative views towards the success rates of weight management. 71% were knowledgeable about weight-loss goals and showed a reasonable level of obesity identification, especially as part of chronic disease care.¹¹

In another study in Malaysia by Muhammad et al. the mean score of parents' perception of the children's weight status on nutrition and obesity was 78.5 ± 14.4 ; and this had no correlation with the accuracy of their perception on the child weight status. Moreover, parents showed inadequate knowledge on the food pyramid and preparation of low fat meals.¹²

In a study in Spain by González Jiménez et al. of all the parameters which were measured, body mass index and waist circumference were the anthropometric indicators that showed a better correlation to blood pressure. Accordingly, BMI and WC are useful anthropometric indicators to predict cardiovascular risk in non-adults.¹³

The study by Salman et al. showed that children who were obese had a relative risk of 14.7 for systolic hypertension compared to normal weight children.¹⁴ According to Stark et al., nutrition and health professionals who participated in a training course had statistically significant increases in their knowledge, skills, and self-efficacy to prevent childhood obesity.¹⁵

Table 1. Awareness and public knowledge about the impact of obesity on hypertension and cardiovascular disease

The Impact of obesity on hypertension	Number of people	Percentile
It has an impact	147	60.7
It has no impact	51	21
Do not know	44	18.2
The Impact of obesity on cardiovascular disease		
It has an impact	160	67.5
It has no impact	41	17.3
Do not know	36	15.2

In the study by Boshtam et al. on effects of 5-year interventions on cardiovascular risk factors of factory and office employees of Isfahan and Najafabad, the intervention project had a protective effect on CVD risk factors in factory and office employees.¹⁶

Conclusion

According to issues discussed, overweight and obesity is known as a health problem in advanced societies, and our country. In our study, the knowledge about one of the complications of obesity (hypertension) was moderate. It seems that social training about complications of obesity would be helpful. Moreover, supplementary studies in different age and social groups are considered essential. Policy making, planning, implementation and monitoring the programs that are designed to assess and deal with weight gain accompanied with targeted researches, should be among the ongoing activities of the Ministry of Health and other social organizations in the country. With changes in knowledge, attitude and performance of the individuals and changes in their lifestyle we can prevent the incidence of these complications and meet one of the aspects of public health care.

Conflict of Interests

Authors have no conflict of interests.

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How to cite this article: Vafaei Z, Karimi H, Mokhtari H, Moeini M, Pishgahi P, Moeini M. **Level of knowledge about the effect of obesity on hypertension among the patients of Isfahan Oil Company Polyclinic, Iran.** *ARYA Atherosclerosis Journal* 2012; 8(Special Issue in National Hypertension Treatment): S142-S144.