



ISSN: 0976-3031

Available Online at <http://www.recentscientific.com>

CODEN: IJRSFP (USA)

International Journal of Recent Scientific Research
Vol. 8, Issue, 10, pp. 20977-20979, October, 2017

**International Journal of
Recent Scientific
Research**

DOI: 10.24327/IJRSR

Research Article

USE OF METFORMIN IN NON-DIABETIC OBESITY PATIENTS

Alves, R S A^{1*}, Rodrigues, A L R¹ and Duarte, S. F. P^{1,2,3}

¹Independent Faculty of the Northeast, Vitória da Conquista, Bahia, Brazil

²Public Foundation of Health of Vitoria da Conquista

³Faculty of Technology and Sciences, Vitória da Conquista, Bahia, Brazil

DOI: <http://dx.doi.org/10.24327/ijrsr.2017.0810.0994>

ARTICLE INFO

Article History:

Received 05th July, 2017

Received in revised form 08th

August, 2017

Accepted 10th September, 2017

Published online 28st October, 2017

Key Words:

Obesity, Medicines, Complications, Side effects.

ABSTRACT

Obesity can be defined as a chronic disease, characterized by the accumulation of fat in the body, the greater the excess fat, the more complications the individual will present during the course of life, such as sleep apnea, cardiovascular disease, and even type II diabetes mellitus. The objective of this study was to analyze non-diabetic obese individuals who use Metformin for reducing body weight. Due to several problems associated with obesity, a part of the population seeks solutions to improve body weight, which may generate future complications. One of the biggest problems nowadays is the use of non-prescription medicines or the help of a specialized professional, using by own account or by indication of friends or family. Metformin is a drug for the treatment of type II diabetes mellitus, which is being used by obese patients, due to some positive effects on weight reduction at the beginning of treatment, which can cause several side effects and harm the health of the individual.

Copyright © Alves, R S A et al, 2017, this is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

Obesity can be defined as a chronic disease characterized by the accumulation of fat in the body, forming huge problem in public health because its prevalence has increased dramatically in the last decade, becoming an epidemic of global proportions (Cominato, L. et al., 2015).

The higher the excess fat, greater the intensity of the disease, creating further complications for the health of the individual, such as dyslipidemia, sleep apnea, cardiovascular diseases, especially diabetes mellitus type ii, generating a high mortality rate, affecting their social relationship to the reduction in life expectancy (Radominski, RB et al., 2010).

The treatment of obesity, this can be of two types, non drug, and drug, the first choice should be a nondrug treatment that involves dietary part, changing eating habits and regular physical activity together with dietary to promote weight loss and decrease insulin resistance (Cominato, L. et al., 2015).

By not achieve positive results in a short period of time, the population prioritizes the adhesion of a drug treatment giving no relevance to other alternative treatment, thereby committing the act of self-medication, making the use of other drugs such as metformin, which is a greater understanding of diabetes

mellitus medicament for adhering to rough handling (Cominato, L. et al., 2015).

The Metformin medicine is an antidiabetic belonging to the class of Biguanides, indicating the treatment of diabetes type two diabetes (DM2) and is used for many centuries in Europe, helping to reduce blood glucose levels decrease glucose production in the liver and increase sensitivity the action of insulin cells (JR, ACS et al., 2007).

In some improvement will ameliorate postprandial hypoglycemia continuously may occur states insulin resistant, which will reduce the hypoglycemia induced by starvation and carbohydrates hence will reduce greater intake of food by reducing glucose in the bloodstream and insulin managing work normally (Igel et al., 2016, p.3).

Based on the positive side, this has become subject of broad interest to nondiabetic patients seeking weight loss, occurring excessive use of this drug and may have greater risks for the population, such as lactic acidosis which is the suppression of gluconeogenesis several substrates including lactate, pyruvate, glycerol and amino acids which lead to accumulation of lactate and symptoms as anorexia, drowsiness, lethargy, nausea, vomiting, and some severe cases such as hypotension, bradycardia and hypothermia (Turkcuer et al., 2008, p.13).

*Corresponding author: Alves, R S A

Independent Faculty of the Northeast, Vitória da Conquista, Bahia, Brazil

METHODOLOGY

The research carried out it is a cross-sectional study, conducting a data collection with quantitative approach carried out in Health Units in the city of President Jânio Quadros-BA, consisting of 13,652 inhabitants according to the 2010 census, locating the 604.9 km from Salvador (Bahia Capital).

As data collection mechanism, a semi-structured questionnaire was used, adapted and suited to the needs of this study, obtaining objective and clear questions, identifying demographic variables in order to determine obese nondiabetic patients using metformin to reduce body weight, as well to identify possible side effects caused by the abuse of this drug that belongs to the biguanide class and used in the treatment of type II diabetes.

The population to be studied, 365 were residents of President Jânio Quadros-BA. The fundamentals used for integrating subjects are adults and obese residents, aged 44-59 years and residing in urban and rural areas in the city of President Jânio Quadros, excluding any resident of another nearby town.

The data collected in the months of September and October 2017 were tabulated in Microsoft Excel and analyzed using descriptive statistics. Project approved by the Ethics and Research Committee (CEP) involving human subjects the city of President Jânio Quadros-BA, CAAE: 70460117.0.0000.5578. The questionnaire was preceded after signing the Informed Consent and Informed by the research subjects (CNS 466/2012).

RESULTS AND DISCUSSION

Of the 365 residents interviewed in the city of President Jânio Quadros-Ba, (53.2%) were women and (46.8%) were men, with prevalence among residents of the urban area (77.7%) of respondents and rural areas (22.7%), during the research was observed in the city of P. Jânio Quadros that the educational level in respect study was extremely small (61.4%) of respondents did not know how read and write, (15.3%) of people have a basic education followed by elementary school with (12.1%) and high school with (11.2%).

The portion of diabetics related study presented is limited to (17.5%), generating a concern about the education and understanding for daily drug treatment, noting that in most cases the patient does not use the drug form correct and others do not even use, generating a greater concern about the health of the individual.

The amount of people using alcohol is relevant to (59.9%) of respondents, since its association with drugs can trigger many problems, due to drugs, like alcohol, they are metabolized in the liver and can takelot work the body, enhancing the effect of drugs and poison the body.

About (70.7%) of respondents residents do not perform any type of exercise, and the prevalence in the study are obese people weighing around 80-100 kilograms, making these sedentary people with a higher risk of serious a problem that already has or may originate.

Table 1 Sociodemographic characteristics of the use of Metformin in nondiabetic obese patients from Pres. Jânio Quadros, BA, 2017

Characteristics	Frequency:	Relative	Absolute
resident	Male		46171,80%
	Female	194	53.20%
	Urban	282	77.30
Education	Rural	83%	22.70%
	Ens.Elementary	44	12.0%
	Ens.average	41	11.20%
Diabetic	Educa. Basic	56	15.30%
	No	224	61.40%
alcoholic beverage of Use	Yes	64	17.50%
	No	301	82.50%
Exer practice. Physical	+	217	59.50%
	No	148	40.50%
indication Metformin	Yes	107	29.30%
	No	258	70.70%
Improved Weight	Friends / Neighbors	35	9.60%
	Social Networks	10	2.74%
Increased dose after the improvement in weight	Yes		42%11.51%
	No	03	0.83
side effects	Yes		09%0.25
	No	36	9.87%
side effects	Weakness and fatigue	22	6.02%
	Headache	34	9.31%
	Nausea and vomiting	29	7.95%

Own search supply (2017)

Self-medication, which in many circumstances is seen as a solution for the immediate relief of some symptoms, which may bring more serious consequences, used on their own or at suggestion of others without the accompaniment of a qualified health professional, in this study, approximately (12.33%) of the study population using metformin for weight loss through nominations by friends or neighbors or through publications on social networks (Cominato, L. et al., 2015).

Between (12.33%) of those who used metformin for reducing body weight (11.51%) had positive results in the first months of treatment, with a slight reduction of its weight. After the weight reduction (9.87%) did not increase the treatment dose and closed due to the presence of side effects due to the use of metformin.

The use of drugs for different therapeutic purposes is high degree of risk for future complications, because there are no studies that demonstrate proven. Metformin is an anti-hyperglycaemic used in type II diabetic patients, its use in nondiabetic patients can cause serious damage to the population with the appearance of side effects, and its use with alcohol could worsen the health of the individual further. The population studied had become quite sedentary and not looking for professionals to provide improvements in their clinical symptoms such as physical exercise to depend on each patient and may or may not increase every day, and a regulated power to improve your blood sugar levels avoiding can diabetes (Neto, 2015).

Side effects due to abuse of the first months of treatment with metformin to reduce body weight described in the chart below, weakness and fatigue (6.33%), headache (9.31%) and nausea and vomiting by (7.95%).

CONCLUSION

The use of drugs without medical prescription or the guidance of a pharmacist is growing and putting at risk the integrity and

health of the population. Self-medication can cause many side effects, due to not having knowledge about the effect of a drug for a treatment that it is not indicated.

We can observe the discussion indicate that there is a lot of people up the weight and with no proper eating habits and lack of physical exercise, making the sedentary individual and greater risks of causing disease or infection.

The demand for drugs for body weight reduction is extensive, establishing an anguished search for the swift processing and reduced costs. Metformin is used for type II diabetes, reducing excess glucose in the body. Because of its improvement in weight at the start of treatment, your search is increasing.

In relation to research, we analyze that about 12.33% of respondents use Metformin to reduce body weight, getting little improvement in weight and experiencing side effects such as weakness and fatigue, headache, nausea and vomiting.

The reduction in body weight requires understanding and monitoring of a health care professional who will assess your situation and look for a specific treatment, such as physical exercise and regulated diet, and depending on their progress, you can associate a specific medicine to help in weight reduction.

References

- ANVISA. CLORIDRATO DE METFORMINA. Disponível em:
<http://www.anvisa.gov.br/datavisa/fila_bula/frmVisualizarBula.asp?pNuTransacao=24789022016&pIdAnexo=4012094>. Acesso em: 22 mai. 2017.
- BRASIL. Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Diabetes Mellitus. Brasília - DF, 2016. Cadernos de Atenção Básica, n. 16, Série A. Normas e Manuais Técnicos. p: 64.
- Cominato, L. *et al.* EFEITOS DA METFORMINA NO Tratamento Da Obesidade E Na Resistência À Insulina Em Crianças E Adolescentes: UMA REVISÃO SISTEMÁTICA. Revista Unilus Ensino e Pesquisa, São Paulo, v. 12, n. 27, p. 49-55, abr./jun. 2015.

- IBGE. Fundação instituto brasileiro de geografia e estatística, dados referentes ao município de presidente jânio quadros.. Disponível em:
<<http://cidades.ibge.gov.br/painel/painel.php?codmun=292570>>. Acesso em: 22 mai. 2017.
- Igel L.I; SINHA, A ; SAUNDERS, K H; APOVIAN, C M; VOJTA, D; ARONNE, L J. Metformin: an Old Therapy that Deserves a New Indication for the Treatment of Obesity. Springer Science+Business Media New York 2016.
- JÚNIOR, A. C. S. *et al.* Metformina e AMPK: Um Antigo Fármaco e Uma Nova Enzima no Contexto da Síndrome Metabólica. Arq Bras Endocrinol Metab, São Paulo, v. 52, n. 1, p. 120-125, abr./out. 2007.
- MUNOZ-CARNAGO, ENRIQUE *et al.* Estudio de biodisponibilidad de metformina 850 mg tabletas de liberación inmediata. CES Med., Medellín , v. 29, n. 2, p. 199-210, Dec. 2015 .
- NAVARRETE-TAPIA, Ulises *et al.* Effect of metformin on obesity associated metabolic phenotypes.Rev. Mex. Cardiol, México, v. 27, n. 1, p. 26-33, marzo 2016.
- NETO, E. M. R. *et al.* Metformina: Uma Revisão da Literatura. Revista Saúde e Pesquisa, Maringá - PR, v. 8, n. 2, p. 355-362, mai./ago. 2015.
- OLIVEIRA, José Egídio Paulo De; MILECH, Adolpho. Diabetes Mellitus Clínica, Diagnóstico Tratamento Multidisciplinar. São Paulo: Editora Atheneu, 2006. p. 1-378.
- RADOMINSKI, R. B. *et al.* Atualização das Diretrizes para o Tratamento Farmacológico da Obesidade e do Sobrepeso.. ABESO 76-Edição Especial, Brasil, v. 18, p. 1-18, out. 2010.
- SALAZAR ALVAREZ, Yohana. Uso de la metformina en la diabetes mellitus tipo II. Rev Cubana Farm, Ciudad de la Habana , v. 45, n. 1, p. 157-166, marzo 2011.
- Turkcuer, I; Erdur, B; Sari, I; Yuksel, A; Tura, P and Yuksel, S. "Severe metformin intoxication treated with prolonged haemodialyses and plasma exchange," *European Journal of Emergency Medicine*, vol. 16, no. 1, pp. 11-13, 2009.

How to cite this article:

Alves, R S A *et al.* 2017, Use of Metformin In Non-Diabetic Obesity Patients. *Int J Recent Sci Res.* 8(10), pp. 20977-20979.
DOI: <http://dx.doi.org/10.24327/ijrsr.2017.0810.0994>
