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ANALYSIS OF ROLE OF PLASMA OBESTATIN LEVELS IN OBESITY WITH ASSOCIATION OF DAILY LIFE STYLE IN PAKISTAN

[1]Dr. Fatima Iqbal, [2]Dr. Hira Butt, [3]Dr. Urooba Yaseen

[1]King Edward Medical University, Lahore, [2]Ameer Ud Din Medical College, Lahore, [3]Fatima Jinnah Medical University, Lahore

Abstract:

Introduction: *Obestatin is a recently discovered peptide produced in the stomach, which was originally described to suppress food intake and decreases body weight in experimental animals. Obesity is an obsessive condition, which results from an irregularity between caloric admission and consumption and is described by excessive muscle to fat ratio.*

Aims of the study: *The main aim of the present study is to analyze the role of plasma obestatin levels in obesity which is associated with daily life style.*

Methodology of the study: *This study was conducted according to the rules and regulations of ethical committee of the hospital. The data was collected from 50 obese patients who were also suffering from heart and cholesterol diseases. These patients who came at Out Patients' Department of Mayo Hospital, Lahore were selected for this study during July 2018 to December 2018. Demographic factors were also asked to the student. Body Mass Index (BMI) and Waist Circumference (WC) were done for patients and controls as anthropometrical tests, while fasting serum glucose (FSG) measured using spectrophotometric technique. Each serum sample was analyzed for obestatin hormone and fasting insulin using enzyme linked immune sorbent assay (ELISA).*

Results: *Mean fasting obestatin levels was 0.450 ± 0.468 and 0.959 ± 0.889 separately in hypertensive and normotensive fat and the distinction of mean fasting obestatin levels between the two gatherings was factually huge with p esteem 0. 000.Mean fasting blood cholesterol level was 206.42 ± 44.420 and 202.39 ± 48.344 respectively in normal and obese and the difference was not statistically significant with p value 0.644.*

Conclusion*: Obestatin plays very important role in obesity and it is directly correlated with blood glucose level. Furthermore, there was a clear relationship between obestatin and both BP and HOMA-IR, suggesting that obestatin might play a role in BP regulation.*

Key words: *Obestatin, obesity, diseases, patients.*

Corresponding author:

Dr. Fatima Iqbal,

King Edward Medical University, Lahore.

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INTRODUCTION:

Obestatin is a recently discovered peptide produced in the stomach, which was originally described to suppress food intake and decreases body weight in experimental animals. Obesity is an obsessive condition, which results from an irregularity between caloric admission and consumption and is described by excessive muscle to fat ratio amassing, that has extreme effect on life quality and life expectance because of the weight of related co-morbidities [1]. Ongoing information from the World Health Organization recommends that 11% of the total populace (the greater part a billion people) is stout, while 35% is overweighed [2]. Besides, the prevalence of obesity is persistently expanding around the world, so uncovering the patho system and finding powerful medications have turned out to be earnest and basic. Amid the previous decades much research has featured that synapse systems controlling hunger and sustaining conduct, subjective capacity, stress and reward conduct are unequivocally and correspondingly connected [3]. Nourishment admission is regularly controlled by a homeostatic drive to reestablish vitality balance, while in specific conditions epicurean or reward-based direction supports the utilization of exceptionally attractive, vitality thick foods [4].

Obestatin is a 23-corrosive metabolic peptide, got from the preproghrelin quality which was disconnected first from the rodent stomach in 2005. Be that as it may, obestatin is additionally communicated in other GI organs (pancreas, liver), fat tissue, skeletal muscle, lungs, thyroid and mammary organs and testicles, recommending a multifunctional job of it, which can act both halfway and peripherally [5]. It was initially depicted as an immediate adversary of ghrelin with anorexigenic impact. Both focal and fringe infusion diminished nourishment allow in a period and portion subordinate way, body weight gain, and intestinal motility by means of the G-protein coupled receptor 39 (GPR39) an individual from the GHSR family which was quickly invalidated as a receptor for obestatin by a few studies [6]. To note, late information propose that obestatin may act through the GPR39 receptor in an autocrine/paracrine way incidentally, in particular as mitogenic factor in myoblasts and GPR39 could intervene the metabolic impacts of obestatin in the fat tissue and GI system [7].

Moreover, obestatin has been appeared to be decidedly related with ghrelin. This recommends levels of both obestatin and ghrelin might be changed in obesity and insulin obstruction. Obestatin has been accounted for to diminish vascular cell attachment particle articulation in endothelial cells when animated with tumor rot factor-α, and to increment oxidized low-thickness lipoprotein authoritative to macrophages. In this way, it might likewise have a potential capacity in the control of blood pressure [8-9].

Aims of the study

The main aim of the present study is to analyze the role of plasma obestatin levels in obesity which is associated with daily life style.

METHODOLOGY OF THE STUDY:

This study was conducted according to the rules and regulations of ethical committee of the hospital. The data was collected from 50 obese patients who were also suffering from heart and cholesterol diseases. These patients who came at Out Patients' Department of Mayo Hospital, Lahore were selected for this study during July 2018 to December 2018. Demographic factors were also asked to the student. Body mass index (BMI) and waist circumference (WC) were done for patients and controls as anthropometrical tests, while fasting serum glucose (FSG) measured using spectrophotometric technique. Each serum sample was analyzed for obestatin hormone and fasting insulin using enzyme linked immune sorbent assay (ELISA).

Statistical analysis

SPSS analysis test was used in making a comparison of the two-tailed P value of the two groups with a significance set at $p<0.05$. Results were considered to be of statistical significance if the two-tailed p-value was less than 0.05.

RESULTS:

Mean fasting obestatin levels was 0.450 ± 0.468 and 0.959 ± 0.889 separately in hypertensive and normotensive fat and the distinction of mean fasting obestatin levels between the two gatherings was factually huge with p esteem 0.000.

Table 01: Comparison of mean fasting obestatin levels between hypertensive and normotensive obese

Group	n	Mean	Std. Deviation	P Value
Hypertensive Obese	57	0.450	0.468	0.000
Normotensive Obese	57	0.959	0.889	

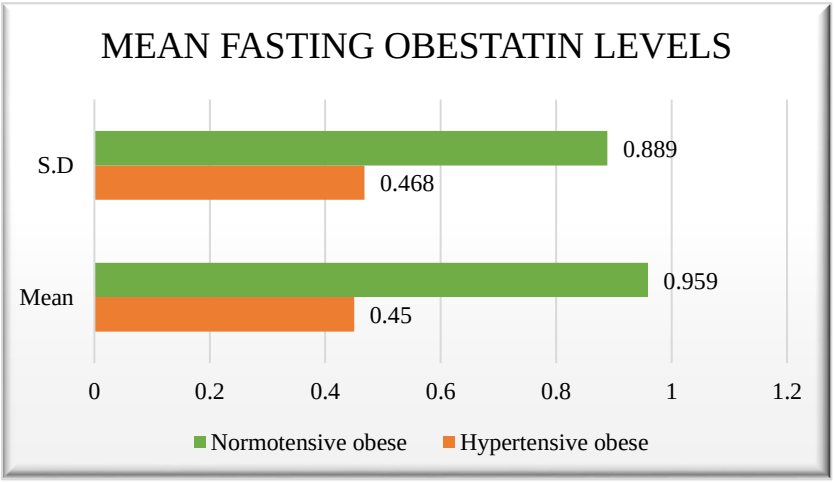
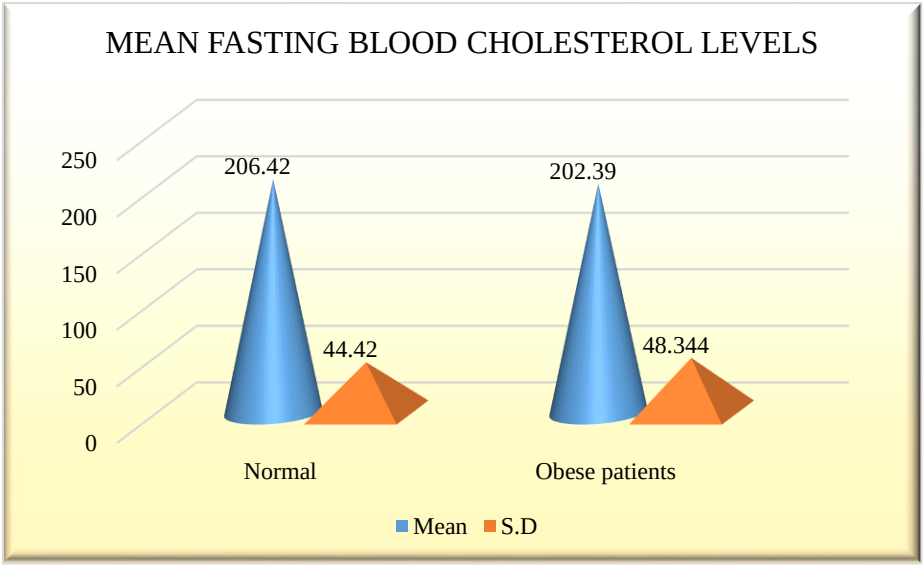


Table 02: Comparison of mean fasting blood cholesterol levels between normal and obese patients

Group	n	Mean	Std. Deviation	P Value
Normal	57	206.42	44.420	0.644
Obese patients	57	202.39	48.344	



Mean fasting blood cholesterol level was 206.42 ± 44.420 and 202.39 ± 48.344 respectively in normal and obese and the difference was not statistically significant with p value 0.644.

DISCUSSION:

Hormones and neuropeptides control and integrate the neuro circuits of metabolism, thirst, thermoregulation, and sleep overlapping in the hypothalamus. As needs be, other than its fringe impacts, focal activities of obestatin were additionally identified [10]. To note first, when controlled ICV this peptide repressed thirst in encouraged and fasted male rodents, and pretreatment with obestatin likewise killed the dipsogenic impact of angiotensin II. Besides, it was likewise recommended that the anorexigenic impact of this peptide is a result of the thirst restraint, the purported drying out anorexia [11].

The neurogenesis in the grown-up hippocampus includes the expansion, movement and separation of forebear cells. These procedures are debilitated by various conditions, for example, hypoxia, addictive medications, continued introduction to worry among others, while certain hormones and development factors advance the expansion and survival of the hippocampal neurons [12].

Obesity has turned into a noteworthy general health issue all through the world and somewhere around 33% of Arabs are stout, and this figure is rising consistently regardless of expanded enthusiasm for wellness [13]. Overabundance fat amassing advances the improvement of insulin obstruction, glucose narrow mindedness and type 2 diabetes mellitus [14]. The expanding prevalence of obesity is a genuine health concern. Obesity is known to be unequivocally connected with hypertension and other arteriosclerotic infection; however, the pathogenic systems connecting hypertension and obesity have not been completely decided [15]. The conceivable jobs of obestatin and ghrelin in obesity and metabolic disorder have been contemplated. Changes in the groupings of these hormones, and in the ghrelin/obestatin proportion, might be chance components for obesity and hypertension [16].

Obestatin levels were essentially decreased recommending that the discharge of the Ghrelin and Obestatin is managed in a restricting way by the healthful status. These discoveries propose that obestatin could adjust endogenous Ghrelin activities and have demonstrated that obestatin may restrain jejunal movement and may smother gastric discharging activity [17]. The job of obestatin in BP control and insulin sensitivity is indistinct, yet systolic BP has been appeared to be an autonomous indicator of the ghrelin/obestatin proportion. Also, fasting plasma groupings of obestatin are decreased in insulin opposition and are decidedly connected with entire body insulin sensitivity in nondiabetic humans [18]. In the present study, hefty patients had brought down fasting plasma obestatin fixations than controls.

CONCLUSION:

Obestatin plays very important role in obesity and it is directly correlated with blood glucose level. Furthermore, there was a clear relationship between obestatin and both BP and HOMA-IR, suggesting that obestatin might play a role in BP regulation.

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