

Adropin and Irisin in Patients with Cardiac Cachexia

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Short Editorial regarding the article: *Adropin and Irisin in Patients with Cardiac Cachexia*

Cardiological clinical practice involves the care of patients with heart failure who lose weight, which not rarely culminates in cardiac cachexia. The differential diagnosis with other consumptive disorders can lead to an extensive diagnostic investigation.

That has been a theme of interest in the medical literature for decades,¹ and its importance remains recognized over time.²⁻⁷ Physicians with decades of experience in cardiological clinical practice have noticed that individuals with heart failure due to heart valvular disease gain weight after well-succeeded surgical interventions that reverse heart failure. In other words, heart failure reversion also manifests as weight gain. A recent outpatient clinical observation [Correia GF & Lima

NNC, unpublished data] of 36 patients for months has found body weight variation with the current pharmacological treatment for heart failure including betablockers (Figure 1).

Different metabolic mechanisms can mediate that clinical manifestation.^{8,9}

In this issue of the *Arquivos Brasileiros de Cardiologia*, Kalkan et al.¹⁰ have added to the studies in the area the results of the research on two proteins that act on the mechanisms of energetic homeostasis – adropin¹¹ and irisin.¹² Those authors have found that the concentration of those proteins differed in 44 patients with cachexia (body mass index 19.9; standard deviation 1.12) as compared to that of 42 patients without cachexia (body mass index 29.2; standard deviation 4.25). On multivariate logistic regression, adropin remained associated with cachexia, despite the low hazard ratio.

Some limitations of the study by Kalkan et al.¹⁰ were the lack of information about the etiology of heart failure, the small sample size and the lack of long-term follow-up data. Therefore, the results presented, although initial and exploratory, are important, and further studies should be conducted to elucidate the metabolic mechanisms of weight loss in patients with heart failure.

Keywords

Heart Failure; Adropine; Cachexia; Prognosis; Weight Loss.

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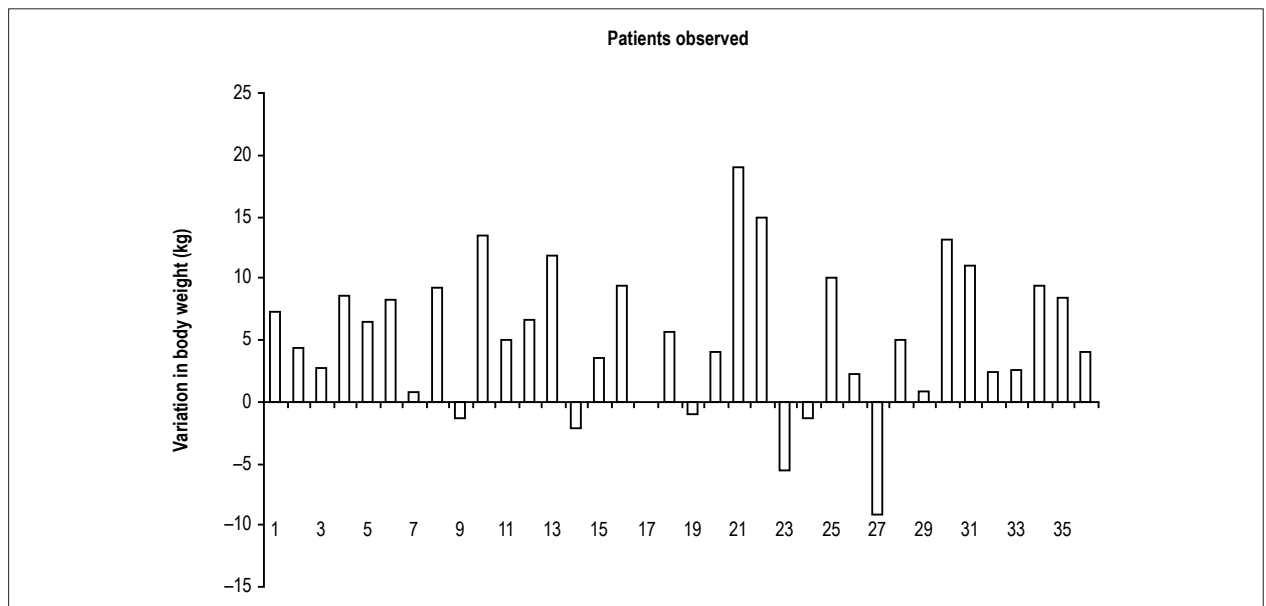


Figure 1 – Body weight variation in 2 observations.

References

1. Pittman JG, Cohen P. The pathogenesis of cardiac cachexia. *N Engl J Med*. 1964 Aug 20;271:403-9.
2. Velloso LG, Csengeri LF, Alonso RR, Ciscato CM, Barreto AC, Bellotti G, et al. [Malnutrition in dilated cardiomyopathy. Correlation with echocardiographic indices of left ventricular function]. *Arq Bras Cardiol*. 1992;58(3):189-92.
3. Anker SD, Negassa A, Coats AJ, Afzal R, Poole-Wilson PA, Cohn JN, et al. Prognostic importance of weight loss in chronic heart failure and the effect of treatment with angiotensin-converting-enzyme inhibitors: an observational study. *Lancet*. 2003;361(9363):1077-83.
4. Veloso LG, de Oliveira MT Jr, Munhoz RT, Morgado PC, Ramires JA, Barretto AC. [Nutritional repercussion in advanced heart failure and its value in prognostic assessment]. *Arq Bras Cardiol*. 2005;84(6):480-5.
5. Veloso LG, Pereira-Barretto AC, de Oliveira MT Jr, Munhoz RT, Morgado PC, Ramires JA. [Score for nutritional status evaluation: the role played in the prognostic stratification of dilated cardiomyopathy and advanced heart failure patients]. *Arq Bras Cardiol*. 2006;87(2):178-84.
6. Okoshi MP, Capalbo RV, Romeiro FG, Okoshi K. Cardiac cachexia: perspectives for prevention and treatment. *Arq Bras Cardiol*. 2017;108(1):74-80.
7. Coats AJ. Cardiac cachexia: a window to the wasting disorders cardiac cachexia (letter) *Arq Bras Cardiol*. 2018;110(1):102-3.
8. von Haehling S, Lainscak M, Springer J, Anker SD. Cardiac cachexia: a systematic overview. *Pharmacol Ther*. 2009;121(3):227-52.
9. von Haehling S, Anker SD. Treatment of cachexia: an overview of recent developments. *Int J Cardiol*. 2015 Apr 1;184:736-42.
10. Kalkan AK, Cakmak HA, Erturk M, Kalban KE, Uzun F, Tasbulak O, et al. Adropina e irisina em pacientes com caquexia cardíaca. *Arq Bras Cardiol*. 2018; 111(1):39-47.
11. Lovren F, Pan Y, Quan A, Singh KK, Shukla PC, Gupta M, et al. Adropin is a novel regulator of endothelial function. *Circulation*. 2010;122(11 Suppl):S185-92.
12. Rodrigues KC, Pereira RM, de Campos TD, de Moura RF, da Silva AS, Cintra DE, et al. The role of physical exercise to improve the browning of white adipose tissue via POMC Neurons. *Front Cell Neurosci*. 2018 Mar 28;12:88.



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