LETTERS TO THE EDITOR

Insulin Resistance May Be Involved in Relationship between Cardiac Autonomic Dysfunction and Polycystic Ovary Syndrome

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To the Editor:

We have read with interest the article by Yildirim et al.¹ on heart rate variability in women with polycystic ovary syndrome (PCOS). The authors have observed that PCOS is associated to an impaired heart rate variability, characterized by a sympathetic hyperactivity. They suggest that this unbalanced autonomic activity may be related to the effects of sex hormones on cardiac autonomic function, but in our opinion an additional mechanism may be involved in this relationship. Since the report by Burghen et al.² in 1980 that PCOS was associated with hyperinsulinemia and insulin resistance. In prior studies,^{3,4} we have showed that insulin resistance is associated per se with an impairment in heart rate variability characterized by increased sympathetic and a reduced parasympathetic components. Since insulin resistance is strictly associated with PCOS, we suggest that cardiac autonomic activity in these subjects may be affected also by insulin resistance. Moreover, recently Dokras et al.⁵ have shown that obesity and

insulin resistance but not hyperandrogenism mediates vascular dysfunction in women with PCOS. We suggest the authors test this hypothesis and determine the contribution of hyperandrogenism or insulin resistance to autonomic dysfunction.

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