To the Editor:

We have read the article by Padfield et al, entitled “Characterization of Myocardial Repolarization Reserve in Adolescent Females With Anorexia Nervosa,” with great interest. The authors evaluated whether exercise testing could be used to unmask the myocardial repolarization abnormality in female patients with anorexia nervosa (AN). They observed that adolescent females with AN had impaired myocardial repolarization reserve in comparison with healthy controls on exercise testing, even in the absence of an obvious resting QT prolongation. This was detected as the excessive prolongation of QTc at a submaximal exercise level and the blunted rate-dependent abbreviation of QT interval at peak exertion.

The pathogenesis of higher mortality in patients with AN is likely multifactorial. Cardiac complications attributable to severe malnutrition are observed frequently, accounting for at least one-third of the deaths in patients with AN. Most deaths occur as sudden cardiac death, likely as a consequence of ventricular arrhythmias. Recently, it was reported that patients with AN had abnormally high levels of some hormones in comparison with healthy subjects. Patients with AN had significantly higher levels of growth hormone, which was at its highest level in patients with the lowest adipose tissue. It was proposed that resistance to growth hormone could be accounted for by this abnormality. Moreover, late potentials were evaluated by signal-averaged ECG in patients with acromegaly because of growth hormone elevation in another study. It was found that late potentials were significantly higher in patients with acromegaly than in healthy subjects, a finding that was suggested to be attributable to growth hormone elevation seen in the patients with acromegaly.

In conclusion, either myocardial repolarization or depolarization abnormalities may account for the increased risk of ventricular arrhythmias in patients with AN, perhaps because of excess growth hormone. This relationship warrants additional evaluation in large-scale, prospective studies and may explain part of the increased cardiac complications seen in patients with AN.

DISCLOSURES

None.

AFFILIATION

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REFERENCES


Letter by Aparci et al Regarding Article, "Characterization of Myocardial Repolarization Reserve in Adolescent Females With Anorexia Nervosa"
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Circulation. 2016;134:e70-e71
doi: 10.1161/CIRCULATIONAHA.116.022369
Circulation is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
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Print ISSN: 0009-7322. Online ISSN: 1524-4539

The online version of this article, along with updated information and services, is located on the
World Wide Web at:
http://circ.ahajournals.org/content/134/6/e70

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