LETTERS TO THE EDITOR

Diagnostic accuracy of dual-source multi-slice CT-coronary angiography in patients with an intermediate pretest likelihood for coronary artery disease

I read the article by Leber et al. with great interest. However, in my opinion, the clinical implications presented are unacceptable. The proposed sequence of procedures (CT scan, followed in some cases by non-invasive stress test to verify ischaemia, followed by cardiac catheterization) causes unnecessary exposure to radiation, risks of complications, costs and contradicts current ESC, and national guidelines on diagnosis and treatment of angina pectoris and PCI (http://www.escardio.org/knowledge/guidelines/, http://leitlinien.dgk.org/images/pdf/leitlinien_volltext/2003-03_koronare_herzerkrankung.pdf). The knowledge of coronary anatomy is mainly required in high-risk situations where special therapeutic options as coronary bypass operation or—in selected cases—PCI may serve to improve survival or limiting symptoms despite medical therapy.

Thus, evidence of ischaemia prior to cardiac catheterization is an integral part of quality assurance programmes in Germany in order to detect clinical centres with unnecessary coronary investigations. At present, introducing CT scans after an initial superficial examination of the patient is a paradigm shift without scientific evidence for its benefit, but with the potential of misleading patients, exploding costs and damaging our reputation.

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Prevalence of positive ECG criteria in young competitive athletes: a single region experience

We have read with great interest the article by Pellicia et al. about prevalence of abnormal ECG in a large, unselected population undergoing pre-participation cardiovascular screening and also read the Editorial by Corrado and Mckenna. As it is known, implementation of 12-lead ECG in the pre-participation screening programme has been a complex area of debate during years.1 Arguments against implementation of ECG as a routine exam are purely economic, but there are others, like the possibility of false positive or the need of further analysis like echocardiogram, which could even increase the cost. However, as Pellicia et al.2 concludes, the prevalence of real ECG abnormalities is low (<5%) and this is what we really should know: to recognize the real positive ECG criteria. In the last European Congress of Cardiology, we communicated a similar work, in press at this moment, with 825 football players belonging to our Regional Sports Federation. Medical history, physical examination, 12-lead ECG were practised on each one. Those with ECG defined as positive by the European Society of Cardiology (ESC criteria) underwent echocardiography assessment. ECG abnormalities were present in 61 (7%), of these 35 were repolarization abnormalities, four Wolff-Parkinson-White (WPW) syndrome, one borderline long QT syndrome, right bundle branch block in eight, voltage criteria in four, right axis in five, ventricular ectopy in four, and in the echocardiogram we found one Hypertrophic cardiomyopathy (HCM), one was defined as an athlete’s heart and five were included in the grey zone.3 So, in our study, we have found one HCM, who stopped sport activity and four WPW who underwent exercise testing and Holter monitoring, otherwise they would have follow up competition and who knows. We really want to agree with Pellicia et al. and Corrado et al., as in our experience we also have a similar low prevalence of positive criteria, just a 7%, and call the authorities to think about the obligatory implementation of ECG in the pre-participation screening programme as a reflection of a society that promotes health.

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compared with other areas of the myocardium, which may account for the apical ballooning during the catecholamine stress in tako-tsubo cardiomyopathy. There can also be abnormal coronary flow in the absence of obstructive disease in patients with stress-related myocardial dysfunction. Study by Akashi et al. using 123I-metaiodobenzyl guanidine myocardial scintigraphy showed a unique pattern of ventricular asynergy, suggesting the existence of cardiac sympathetic hyperactivity with maintained coronary blood flow. Therefore, there is a possibility that abnormal glucose metabolism at the cardiac apex may be due to the increased density of adrenal receptors in the apex.

Do the sex hormones play a role in pathogenesis of tako-tsubo cardiomyopathy?

From the available medical literature so far, women—especially middle-aged or elderly—are the most commonly affected. The same gender difference is again demonstrated in the study by Yoshida et al. Mostly, this disease affects young women and men, but the vast majority of these patients are post-menopausal women. Indeed, >90% of the patients suffering from stress cardiomyopathy are females. The basis for this predisposition is unknown. Sex hormones exert important influences on the sympathetic neurohormonal axis as well as on coronary vasoactivity, but sex-related differences in catecholamine metabolism and responsiveness are complex and remain poorly understood.

References


We thank Dr Radhakrishnan for his interest in our work. We are pleased to have the opportunity to reply to his constructive comments. Some previous investigators have reported that markedly reduced F18-FDG uptake, relative to perfusion at the cardiac apex, has been observed in this syndrome during the acute phase, which resolved by the time of follow-up. This phenomenon may imply a close relationship between the glucose metabolic disorder and the onset of tako-tsubo cardiomyopathy, although we did not evaluate glucose metabolism in patients with tako-tsubo cardiomyopathy during the chronic phase. On the other hand, Wittstein et al. reported that sudden elevations in plasma catecholamine levels after emotional or physical stress are possibly involved in the pathogenesis of tako-tsubo cardiomyopathy, although the pathophysiological mechanism underlying the deteriorating effect of catecholamines is not fully understood. In fact, all of our patients had a marked elevation of norepinephrine after the onset of tako-tsubo cardiomyopathy. Another study showed that high doses of catecholamines possibly depress glucose uptake with respect to beta receptor stimulation. Additionally, it has been reported that beta adrenergic receptor density in the apical myocardium is greater than that at the base, and increased myocardial responsiveness to adrenergic stimulation in the apical myocardium compensates for its sparse sympathetic innervation. Therefore, we speculate that the biased localization of adrenergic receptors in the apical myocardium may account for the association between the abnormal catecholamine flux...