Long-term prognostic significance of right bundle-branch morphology ventricular ectopy induced during stress test in patients with intermediate to high probability of coronary artery disease

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Résumé en anglais	Aims: Stress-induced right bundle-branch block morphology ventricular ectopy (SI-RBVE) may be caused by left ventricular myocardial anomalies. While frequent ventricular ectopy (FVE) has been linked to poor outcomes, the prognostic value of SI-RBVE has not been established. The study aims to determine whether SI-RBVE is associated with increased mortality. Methods and results: Three hundred forty-three patients with an intermediate to high probability of coronary artery disease were prospectively included. Patients were referred for a single-photon emission computed tomography and underwent a stress test according to standard protocols. Stress-induced right bundle-branch block morphology ventricular ectopy (VE) was defined as one or more induced premature beats with positive predominance in V1. Frequent VE was defined as the presence of seven or more ventricular premature beats per minute or any organized ventricular arrhythmia. During a mean follow-up of 4.5 ± 1.3 years, 59 deaths occurred. The death rate was higher in the SI-RBVE group (23.4% vs. 14.0%, P = 0.021). Age [odds ratio (OR) = 1.09 (95% CI: 1.06-1.13), P < 0.001] and peripheral artery disease [OR = 2.47 (95% CI: 1.35-4.50) P = 0.003] were independent factors of mortality, but single-photon emission computed tomography findings were not. There was an interaction between SI-RBVE and left ventricular ejection fraction (LVEF). In patients with LVEF > 50%, SI-RBVE was an incremental risk factor for mortality [OR = 2.83 (95% CI: 1.40-5.74), P = 0.004]. Stress-induced right bundle-branch block morphology VE patients also presented higher rates of known coronary artery disease, ischaemia, scar, and ST-segment changes. Frequent VE was not related to mortality. Conclusion: Stress-induced right bundle-branch block morphology VE is associated with an increased mortality in patients with preserved LVEF.
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