The Prognostic Value of a QRS Score during Exercise Testing

ANDREAS P. MICHAELIDES, M.D., FESC, FACC,* MARIA-NIKI K. AIGYPTIADOU, M.D.,* GEORGE K. ANDRIKOPoulos, M.D., FESC,* DIMITRIS J. RICHTER, M.D.,* ATHANASIOS KARTALIS, M.D.,† EVSTRATIOS TAPANLIS, M.D.,† CHRISTOS A. FOURLAS, M.D.,† CHRISTODOULOS I. STEFANADIS, M.D., FESC, FACC†

*Exercise Laboratory and †Catheterization Laboratory, Department of Cardiology, A’ Cardiology Clinic, Medical School of Athens University, Hippokration Hospital, Athens, Greece

Summary

Background: Values of a QRS score have been positively related to the number of narrowed coronary arteries and to the extent of myocardial ischemia in radionuclide imaging techniques.

Hypothesis: This study was conducted to evaluate the potential prognostic information of abnormal values of this QRS score during treadmill exercise testing in patients with established coronary artery disease (CAD).

Methods: In all, 309 patients (258 men, 51 women, mean age 56.1 ± 10.0 years) with documented CAD, underwent a treadmill exercise test and coronary arteriography at baseline. Subsequently, they were prospectively followed to a maximum of 36 months (mean follow-up 23 ± 13 months, median 25 months).

Results: During the follow-up period, 20 patients (6.5%) died from acute myocardial infarction. Abnormal QRS score values were found to be significantly and independently associated with cardiac mortality (QRS \( \leq 4 \): relative risk 11.7; 95% confidence interval = 2.5–55.4; \( p = 0.002 \)).

Conclusions: Taking into consideration the importance of exercise testing in the management of ischemic heart disease, the use of this QRS score could be of clinical value in predicting the outcome of patients with documented CAD.

Key words: prognosis, coronary artery disease, exercise testing, QRS score

Address for reprints:
Assoc. Prof. Andreas P. Michaelides
108, Vas. Sofias Ave.
11527 Athens, Greece
e-mail: aigyptiadou@yahoo.gr

Received: January 5, 2005
Accepted with revision: April 13, 2005