

MULTILEAD ANALYSIS OF T WAVE ALTERNANS IN STRESS TEST

V. Monasterio, J.P. Martínez

CIBER-BBN, Instituto de Investigación en Ingeniería de Aragón,
Communications Technologies Group, University of Zaragoza, Zaragoza, Spain

Abstract

T-wave alternans (TWA) is considered as an index of susceptibility of sudden cardiac death. In this work, a TWA analysis has been performed on a set of stress test ECGs, comparing a novel multilead analysis scheme with a single-lead scheme. ECG signals belonging to healthy volunteers and ischemic patients have been analyzed. Results show that the multilead scheme provides a higher sensitivity to low-level alternans than the single-lead scheme. Furthermore, results obtained with the multilead scheme are significantly different in volunteer and ischemic groups, whereas results obtained with the single-lead scheme are not.