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Cardiocentro ERNESTO CHE GUEVARA SANTA CLARA CUBA

Prolonged QT interval preceding injury current in myocardial infarction

QT prolongado que precede a la corriente de lesión en el infarto

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Key words: QT interval, acute coronary syndrome, acute myocardial infarction
Palabras Clave: Intervalo QT, síndrome coronario agudo, infarto agudo de miocardio

Male 73-year-old patient with a history of hypertension, obesity and dyslipidemia, undergoing treatment with enalapril and chlorthalidone, and presenting with a typical chest pain episode accompanied by sweating, nausea and an electrocardiogram in sinus rhythm with a PR interval of 200 ms and deep negative T waves in V2-V6, T negative waves in leads DI, DII, DIII and aVF, with marked prolongation of the QT interval. The QTc, according to Bazett's formula, was 730 ms (Figure 1), which was interpreted as an acute coronary syndrome. A second evolutionary electrocardiogram was conducted (Figure 2), which showed an ST elevation of 2 mm in V3-V5. An acute myocardial infarction with ST-segment elevation was diagnosed, and, in consequence, a thrombolytic therapy and an anti-ischemic therapy were used, after which there was a clinical and electrical improvement. The following day, the patient presented postinfarction angina, accompanied by electrical changes. Therefore, it was decided to consult the Cardiac Catheterization Department of the Ernesto Che Guevara Cardiology Hospital about the case. A coronary angiography was performed, showing the presence of a significant ostial lesion, of the left main coronary artery; a significant lesion in the middle portion of the anterior descending artery; and another significant lesion at the ostium of the circumflex artery. The echocardiogram showed a slightly depressed contractile function (ejection fraction of 0.46), with hypokinesia of septal segments and anterobasal, middle and apical segments, and a prolonged relaxation pattern of the left ventricle. The patient was discharged with anti-ischemic treatment after several days without pain, although the electrocardiogram showed a persistence of negative T waves in leads DII, DIII and aVF, and V3-V6, with a QTc of 470 ms (Figure 3). Right now the patient is stable from a clinical standpoint, awaiting coronary artery bypass grafting.

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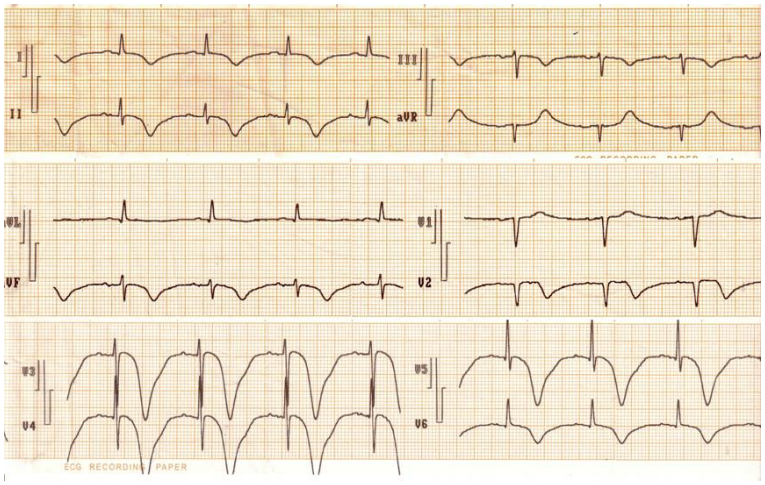

Figure 1

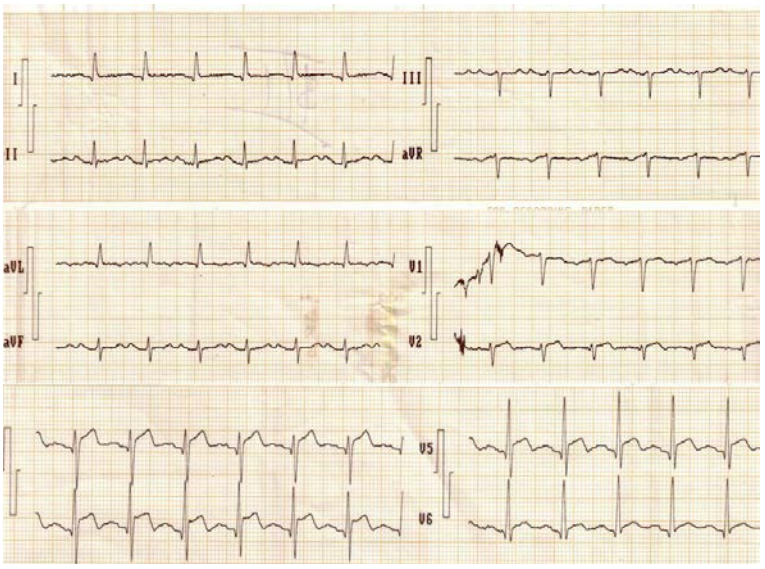

Figure 2

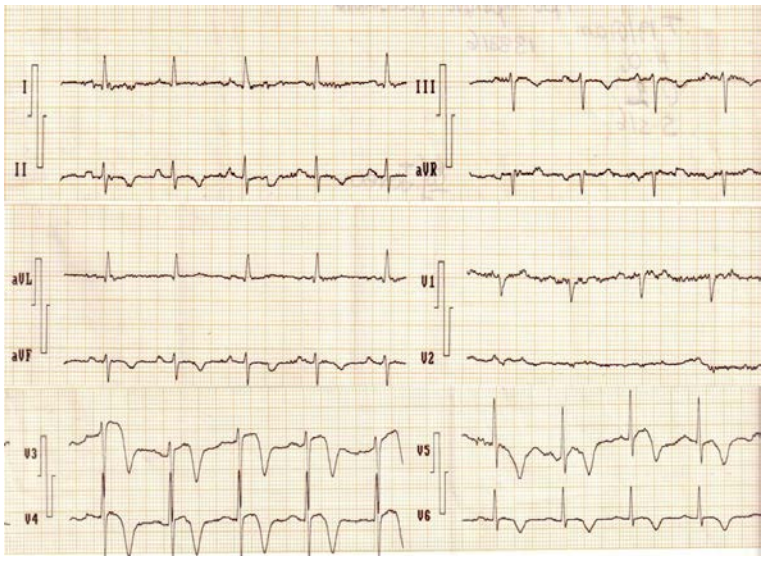

Figure 3