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Left main coronary calcification mimicking dissection: multislice computed tomography saves the patient from emergent surgery

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Left main coronary calcification mimicking dissection: multislice computed tomography saves the patient from emergent surgery

Tahir DURMAZ¹, Telat KELEŞ¹, Nihal AKAR BAYRAM², Melike RUŞEN METİN³, Hüseyin AYHAN²,
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Abstract: Diagnosis of coronary artery dissection using multislice computed tomography (MSCT), particularly of the left main coronary artery (LMCA), has been rarely reported. Coronary anatomy and calcification can be evaluated with MSCT. Herein, we present a case with acute coronary syndrome and coronary artery calcification mimicking the LMCA dissection detected by MSCT.

Key words: Left main coronary artery calcification, multislice computed tomography, dissection

Diseksiyonu taklit eden sol ana koroner kalsifikasyonu: çok kesitli bilgisayarlı tomografi hastayı acil cerrahiden kurtardı

Özet: Çok kesitli bilgisayarlı tomografi (ÇKBT) kullanılarak koroner arter diseksiyonu teşhisi (özellikle sol ana koronerin) nadir olarak raporlanmıştır. Koroner anatomi ve kalsifikasyon ÇKBT ile değerlendirilebilir. Burada ÇKBT ile saptanmış diseksiyonu taklit eden sol ana koroner kalsifikasyonu olan akut koroner sendromlu bir vakayı sunduk.

Anahtar sözcükler: Sol ana koroner arter kalsifikasyonu, çok kesitli bilgisayarlı tomografi, diseksiyon

Introduction

Although atherosclerotic stenosis is the major cause of obstructive left main coronary artery (LMCA) disease, sometimes other pathological factors, such as iatrogenic dissection during coronary angiography, may be the cause of LMCA disease (1). Herein, we present a left main coronary calcification mimicking dissection using MSCT.

Case

A 54-year-old male patient was admitted to our emergency department with chest pain lasting for 30 min. There were negative T waves in leads V1-3, DIII, and aVF in the electrocardiogram. The patient was hospitalized in the coronary care unit. During his follow-up period, troponin I levels increased and the patient was diagnosed with non-ST elevation myocardial infarction.

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He had hypertension and hyperlipidemia. The patient had undergone coronary angiography twice, in 2004 and 2007. Medical follow-up had been pursued. Echocardiographic examination revealed hypokinesia in the posterior wall and mild regurgitation of the mitral and the aortic valves. During coronary angiography, a shadowy translucent lesion in the LMCA was detected

(Figures 1-3). We suspected LMCA dissection and started to evaluate the patient for a probable emergent surgery. Hemodynamic parameters of the patient were stable, so we decided to perform multislice computed tomography to assess the LMCA anatomy. The MSCT revealed that the lesion in the LMCA was an eccentric calcification mimicking dissection (Figures 4,5).

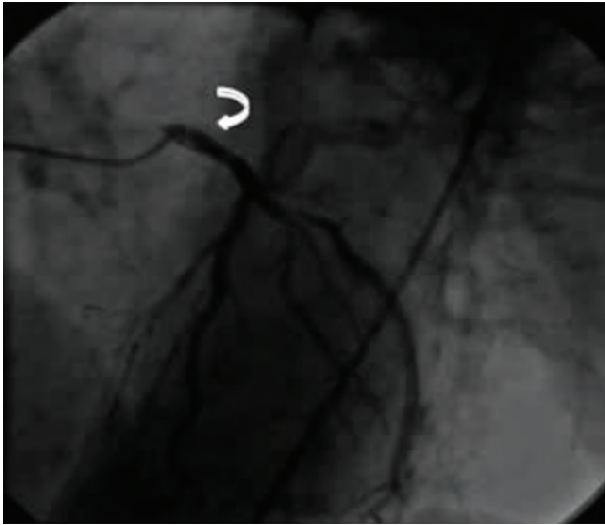


Figure 1. LAO projection showing the translucent shadowy opacification in the left main coronary artery (LMCA).

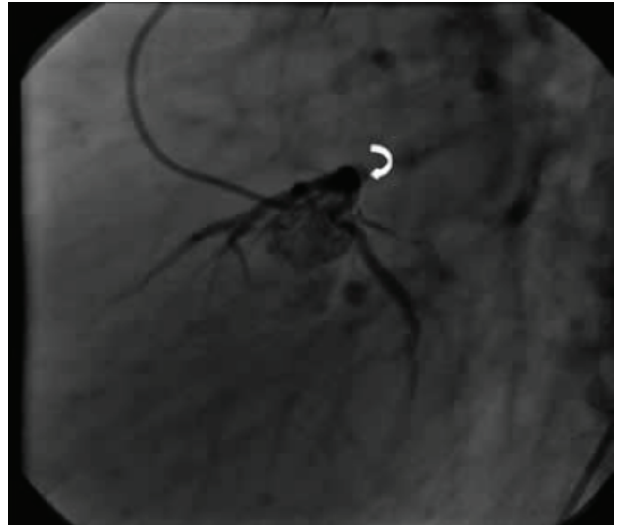


Figure 2. Opacification like a cap.

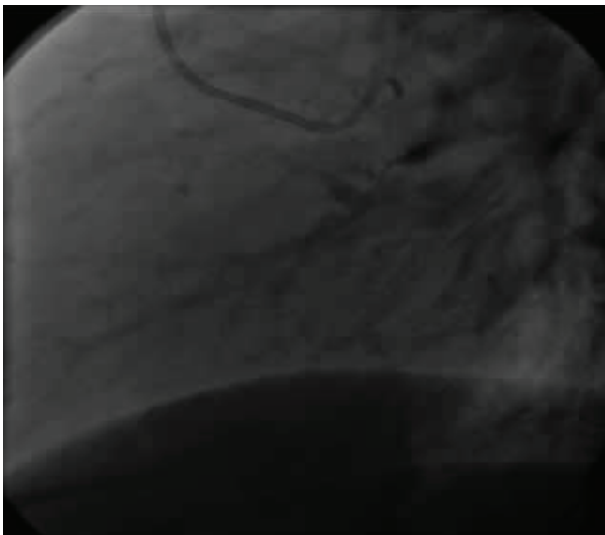


Figure 3. Opacification persists after contrast injection.

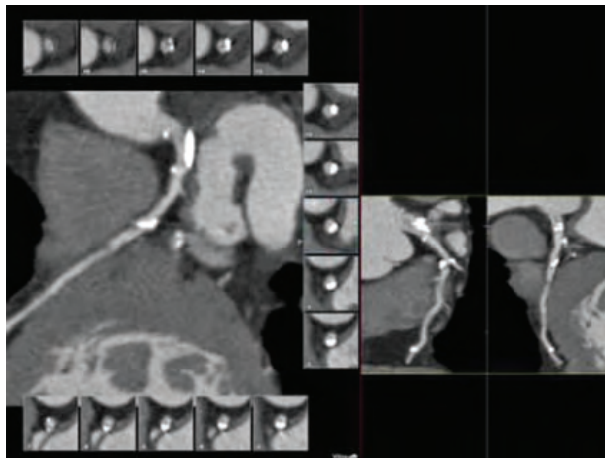


Figure 4. Multislice computed tomography (MSCT) demonstrating the calcification in the LMCA.

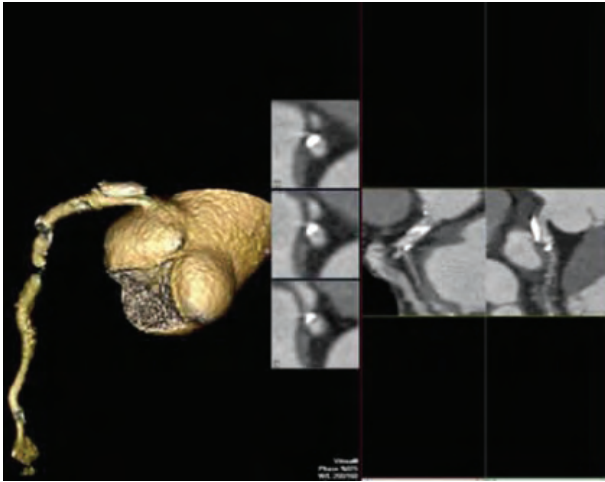


Figure 5. The MSCT clearly shows the calcified plaque.

Discussion

Catheter-induced dissection of coronary arteries is a rare but well-recognized complication of coronary angiography (2). This type of dissection may be life threatening, especially in hemodynamically unstable patients. Documentation of coronary artery dissection (particularly of the LMCA) using multislice computed tomography has been rarely reported (3-5). The importance of MSCT for the diagnosis of coronary artery disease has been reported in recent studies (6). MSCT can be recommended for the assessment of LMCA anatomy. Because MSCT has the ability of 3-dimensional reconstruction, the course and bifurcation of the LMCA can be clearly evaluated via MSCT (7).

Conclusion

MSCT coronary angiography can be recommended as a complementary diagnostic tool for the assessment of LMCA anatomy.

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