effect), b_2 the regression coefficient for every unit increase in the patient's age and b_3 the fixed estimates for patients in the study group versus the control group. The term u_{1j} refers to the random departures or "residuals" at the surgeon level. This

allows the j 'th surgeon's line to differ from the average regression line. u_{1j} is the level 2 random coefficient for surgeon j , or "surgeon-effect", which assumes a normal distribution with a mean of zero and variance σ_{u12} .

IMAGES IN CARDIOLOGY

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Acute myocardial infarction occurring at pre-existing mild stenosis, on the image obtained 3 days before the onset of acute myocardial infarction

Coronary occlusion and myocardial infarction often evolve from mild to moderate stenoses, as documented in previous reports. However, the evolution time from mild stenoses to an infarct-related arteries is still not known. According to a previous study, the fea-

tures of infarct-related coronary segments 3 days before acute myocardial infarction (AMI) were the presence of a significant stenosis of $>50\%$ and multiple irregularities, an indicator of plaque rupture and thrombi; and the features at 1 year before AMI were mild stenosis of $<50\%$ with

rare complicated lesions.¹ We report AMI occurring at pre-existing mild stenosis, based on the multidetector CT (MDCT) image of 3 days before the event. Our experience suggests that the evolution time from mild stenotic lesions to infarct-related arteries may be shorter than previously expected.

A 75-year-old man presented at an outpatient clinic with 3 months of effort angina. He had no history of hypertension or diabetes, and his past history was unremarkable. On visiting the hospital, his blood pressure was normal. A 12-lead ECG showed a normal sinus rhythm. Stable angina and coronary artery stenosis were suspected. Therefore, we decided to use MDCT to examine the coronary arteries at the outpatient clinic (panel A). We planned to follow up the patients 1 week after the CT examination. Heavy calcifications on the proximal left anterior descending artery were noted. But only mild stenosis was seen at mid-left anterior descending artery lesions (panel B). However, he attended the hospital's emergency room with prolonged chest pain 3 days after the CT examination. An ECG showed a marked ST-segment elevation in leads V2–V4 with a rise in cardiac enzymes, suggesting ST-elevation myocardial infarction. Sublingual nitroglycerin could not relieve the pain. An emergency coronary angiogram showed a total occlusion of the mid-left anterior descending artery with TIMI II distal flows (panel C). Primary percutaneous coronary intervention (PCI) was successfully performed with a drug-eluting stent (panel D). The patient was discharged 3 days after the PCI and has remained asymptomatic for 3 months.

J-Y Moon, D Choi, Y J Kim
cdhlyj@yumc.yonsei.ac.kr

Reference

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