Clinical significance of radiating pain in patients with unstable angina diagnosed by coronary computed tomography angiography

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\textbf{Background:}
Unstable angina (UAP) is a critical phase of coronary artery disease. Radiating pain is a frequent symptom in UAP, but its clinical significance remains unclear. This study aims to investigate the clinical significance of radiating pain in UAP diagnosed by coronary CTA.

\textbf{Methods:}
We examined 1856 consecutive patients who underwent coronary CTA at our institution between February 2016 and July 2016. Two cardiologists visually diagnosed coronary stenosis over 50\% as significant stenosis. Unstable angina (UAP) was diagnosed as significant stenosis and chest pain based on Braunwald’s classification. Between UAP and non-UAP patients with significant stenosis (AP), clinical characteristics and radiating pain were comparatively analyzed.

\textbf{Results:}
Of the 1856 patients who underwent coronary CTA exam, 518 patients (28\%) had significant stenosis, and 74 patients (14\% of patients with significant stenosis) were diagnosed with UAP. Radiating pain (UAP: 49\% vs AP: 19\%, p<0.001), as well as resting chest pain, effort chest pain, and smoking were significantly more frequent in UAP than AP. No significant difference was found in any other coronary risk factors, BMI, sex, and age. In the multiple logistic regression analysis, radiating pain, resting chest pain, and effort chest pain were independently associated with UAP (all for p<0.02).

\textbf{Conclusions:}
In patients with significant coronary stenosis diagnosed by coronary CTA, radiating pain was more frequently and independently associated with UAP. Radiating pain may be useful for diagnosing UAP in patients with significant stenosis.