Acute coronary syndrome: diagnosis and outcomes

Thursday, 7 December 2006, 8:30–10:00
Location: Novak
and 6-months two-dimensional echocardiographic follow-up in order to as-
ssess end diastolic volume (LVEDV) and LV contractility. Of the 30 pts, 20
patients admitting to emergency department with new onset chest pain.
aim of this study was to evaluate whether SRI would increase the diagnostic
sensitivity of myocardial ischemia during acute MI, stress echo or PCI. The
study was to determine the prevalence and the features of this syndrome in
a large population presenting with ACS.
Background: The era of primary PCI and aggressive antiplatelet treat-
ment yields a sensitivity of 73% and specificity of 76% for identification of
CAD among the patients admitting to emergency department with non-di-
agnostic ECG and new onset chest pain. ROC analysis revealed significantly
better diagnostic value of SRI than 2D in prediction of CAD or MACE. (AUC:
0.74 vs 0.86 for CAD and 0.76 vs 0.86 for MACE, p<0.05).
Conclusion: Assessment of LV deformation abnormalities at rest or during
low level exercise by SRI may further increase the diagnostic accuracy of
echocardiography to define high risk CAD among the patients admitting to
dependency of acute department with cardiac pain.

155 Value of echocardiography for the detection of left ventricular outflow
tract obstruction in Tako-Tsubo syndrome
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Background: Tako-Tsubo (TT) syndrome is a clinical entity mimicking acute
coronary syndrome (ACS). Some cases have reported TT syndrome associ-
ated with left ventricular outflow tract (LVOT) obstruction. The aim of our
study was to determine the prevalence and the features of this syndrome in
large population presenting with ACS.
Material and methods: Among 6705 pts referred to 2 catheterization labo-
raries, this study consisted of 2726 pts who underwent coronary arteriog-
raphy for suspicion of ACS. All pts underwent an echocardiography, a coro-
nary arteriography and a LV angiogram <48 hours after the symptom onset.
We defined TT syndrome as (1) an acute chest pain during stressful incident
associated with ST-segment abnormalities and/or increased serum troponin
level, (2) regressive systolic dysfunction, and (3) no coronary lesions. In-ho-
spital mortality and follow-up (21±12 months) was collected in all patients.
Results: Among the 2726 pts, 23 pts (mean age: 68±13 yr) presented with
a TT syndrome. The prevalence of TT syndrome in our population was 0.8%.
Five patients (22% of TT syndrome) exhibited significant LVOT obstruction.
This finding was performed using Doppler 2D echo. The mean peak of plasma
creatinine kinase and of troponin I was respectively 301±263 U/l and 5.6±5.2
µg/l. Mean LVEF by LV angiogram and by 2D echo was respectively 45±5% and
37±6%. Twenty-one pts presented a typical pattern of TT syndrome with
skinesis of the mid and distal segments of all walls, with compensatory
hyperkinesia of the base. Two pts presented a partial and circular pattern of
TT syndrome. No patient with dynamic intraventricular pressure gradient
received inotropic agents, avoiding to increase the degree of obstruction,
but these 5 patients received beta blockers. All pts with TT syndrome had a
recovery of wall motion abnormalities and LVEF was rapidly improved, as
observed with echocardiographic follow-up. No pts with TT syndrome died
or presented a major adverse cardiovascular event.
Conclusion: Our study suggests that 25% of TT syndrome exhibited LVOT
obstruction. Echocardiography should be systematically performed, allow-
ing to guide treatment and to prevent adverse effect of the use of inotropic
agents in this population of TT syndrome.

154 Improved prediction of coronary artery disease by using strain rate
imaging in patients with acute chest pain and non-diagnostic ECG
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Purpose: Quantification of myocardial deformation by strain rate imaging (SRI)
has been reported to improve diagnostic accuracy of 2D echo in ident-
fication of myocardial ischemia during acute MI, stress echo or PCI. The aim
of this study was to evaluate whether SRI would increase the diagnostic
accuracy of echo in prediction of coronary artery disease (CAD) among the
patients admitting to emergency department with new onset chest pain.

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