Abstract: P3667

Diagnostic value of cardiac CT scan in patients with suspected infective endocarditis

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Background

Infective endocarditis (IE) is a severe disease requiring early diagnosis and treatment. Although echocardiography (ECHO) is the key diagnostic method, CT-scan (CT) has recently been added as a new ESC diagnostic criterion. However, published data are scarce and included few patients

Purpose: To assess the additional value of CT over ECHO for the diagnosis of IE

Methods

Between 2014 and 2017, 246 pts with suspected IE underwent both ECHO and CT. Using the expert consensus of the Endocarditis Team after a 3-month follow-up as gold standard, 222 IE were confirmed (112 native [NVE] and 110 prosthetic [PVE]) and 24 were rejected.

The primary end-point was the comparison between ECHO and cardiac CT (CCT) findings.

The secondary end-point was the change in diagnostic criteria sensitivity and specificity associated with the addition of CT results.

Results

1 - Among the 110 cases of definite PVE,
Vegetations were found in 49(44%) pts by ECHO and 45(40%) by CCT (agreement in 71[64%] pts).
Periannular lesions were found in 33(30%) pts by ECHO and 46(41%) by CCT (agreement in 86[77%] pts)
CCT found a new cardiac lesion missed by ECHO in 10(9%) pts

2 - Among the 112 cases of definite NVE,
Vegetations were found in 84(76%) pts by ECHO and 90(81%) by CCT (agreement in 84[76%] pts)
Periannular lesions were found in 34(30%) pts by ECHO and 29(26%) by CCT (agreement in 58[52%] pts)
CCT found a new cardiac lesion missed by ECHO in 3(3%) pts

3 - Including CT findings as major and minor criteria increased the sensitivity of Duke criteria from 60 to 70% in 124 suspected PVE, and from 73 to 80% in 122 suspected NVE, without significant decrease in specificity

Conclusions

1 - This study is the largest prospective study assessing the value of CT in the diagnosis of IE

2 – Adding CT findings significantly increases the sensitivity of Duke criteria, both in NVE and PVE
3 – Our results support the use of ESC criteria including CT rather than Duke criteria