COST-EFFECTIVENESS OF CONTRAST ECHOCARDIOGRAPHY IN THE DIAGNOSIS OF CORONARY ARTERY DISEASE

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OBJECTIVE: To review the existing evidence of the economic impact of contrast echocardiography (CE) in the diagnosis and management of patients with suspected or known coronary artery disease (CAD).

METHODS: A systematic search was undertaken to identify studies that provided empirical evidence of the cost-effectiveness of CE relative to an alternative diagnostic modality. Findings and study methodologies were reviewed and suggestions for further research were offered.

RESULTS: Six studies were identified, including one conference abstract and one unpublished study. In four studies of patients with sub-optimal un-enhanced echocardiographic images, CE was reported to reduce the average cost to obtain a diagnosis by 17–64% compared with a second-line nuclear imaging (SPECT) test. However, these studies did not include the impact of potential differences in diagnostic accuracy between tests. A fifth study reported that compared with trans-oesophageal echocardiography (TOE), CE resulted in similar yield of accurate diagnoses at a substantially lower cost for CAD, the average cost to identify CAD was lowest when SPECT Tc-99m or CE ($267 and $335 per case detected, respectively) and highest when exercise echocardiography ($1320 per case detected) was used as the first-line test. CONCLUSIONS: The results support the cost-effectiveness of CE compared with nuclear imaging in patients with a sub-optimal un-enhanced image, and potentially in other patient sub-groups such as those with an intermediate risk of CAD. However, more comprehensive economic analyses incorporating diagnostic accuracy and its implications for patient management are required before these results can be considered conclusive. More research is also needed to assess the economic impact of myocardial contrast echocardiography (MCE) in its wider applications in the management of CAD patients, such as the assessment of myocardial viability.

A COST-EFFECTIVENESS ANALYSIS OF LOW-DOSE ASPIRIN IN THE PRIMARY PREVENTION OF CARDIOVASCULAR DISEASE IN FOUR EUROPEAN COUNTRIES

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OBJECTIVES: Low-dose aspirin is standard care in patients with cardiovascular disease (CVD). In primary prevention the use of aspirin is not fully established although meta-analyses and guidelines support its use in persons at increased CVD risk. This study assessed the health economic consequences of the use of low-dose aspirin in the primary prevention of CVD in the UK, Germany, Spain and Italy. METHODS: Based on data from two meta-analyses, a Markov model was developed to predict the cost-effectiveness of aspirin in the primary prevention of CVD. Different time horizons (1 to 10 years), 1-year cycles and health state transition probabilities were used. Effects were expressed in Quality-Adjusted Life-Years (QALY). Utility data (TTO) were obtained from published data. CONCLUSION: Based on the clinical findings of CURE and PCI-CURE trials clopidogrel appears to be cost-effective in Poland. Although results obtained from two different sources of survival data are consistent, the interpretation of present findings requires further adjustment to Polish epidemiological settings.