

慢性冠心症診斷的影像學選擇

吳彥雯主任

亞東紀念醫院 心臟血管醫學中心

Due to variable symptoms of coronary artery disease (CAD), objective tests are often necessary to confirm the diagnosis, exclude alternative diagnoses, and assess the severity of underlying disease. This talk will discuss the main diagnostic strategies in the current evidence and international guidelines for evaluation of patients suspected of having significant CAD.

Single photon emission computed tomography (SPECT) myocardial perfusion imaging (MPI) has attained widespread clinical acceptance for management guidance of patients with CAD. PET has high accuracy and SPECT has moderate accuracy to detect hemodynamically significant CAD with FFR as the reference standard. Subclinical coronary atherosclerosis/low grade coronary stenosis (i.e. <50%) not linked with ischemia remains undetected by functional testing. In outcome trials, functional imaging tests have been associated with fewer referrals for downstream invasive coronary angiography compared with a strategy relying on anatomical imaging.

Evaluation of CAD using cardiac computed tomography (CT) has seen a paradigm shift in the last decade. The absence of coronary calcium is associated with a low prevalence of obstructive CAD (<5%), and low risk of death or non-fatal MI (<1% annual risk). If risk decision is uncertain, measuring CAC in selected adults is helpful. Evidence increasingly supports the clinical utility of coronary CT angiography across various stages of CAD. It detects subclinical coronary atherosclerosis, but can also accurately rule out both anatomically and functionally significant CAD. It can noninvasively quantify plaque burden and identify high-risk plaque. However, stenoses estimated to be 50-90% by visual inspection are not necessarily functionally significant to induce myocardial ischemia. The combination of anatomic and functional tests holds the promise of overcoming the limitations of inherent to anatomic and functional tests, enabling more accurate diagnosis, prognosis, and guidance of revascularization of patients with CAD.

Due to concerns of cost and radiation, in asymptomatic subjects, only those at high event risk or uncertain diagnosis after clinical assessment could be considered for further non-invasive or invasive testing and biomarkers.