Imaging: Stable Ischemic Heart Disease

KEY QUESTIONS FOR APPROPRIATE TESTING

1. What are the clinical goals for imaging in this patient?
   • Differential diagnosis
   • Rule out
   • Risk assessment reclassification
   • Inform therapeutic decision making

2. Can this information be obtained another way without imaging?
   • History
   • Physical exam
   • Standard risk assessment
   • Labs

3. What will an abnormal result mean to the patient’s probability of disease?
   • Low pre-test probability – false positive rate much higher than true positive
   • Intermediate pre-test probability – test may help reclassify patient to higher or lower risk
   • High risk patients – test unlikely to alter probability but may inform treatment

4. Does the patient have any absolute or relative contraindications to imaging or subsequent treatment?
   • Pregnancy
   • Renal insufficiency
   • Pacemaker
   • End-of-life
   • Allergies

KEY DECISION VARIABLES FOR APPROPRIATE TESTING

• Patient risk factors (age, gender, symptoms, comorbidities, etc.)
• Symptom status
• Ability to exercise and ECG interpretability
• Procedure history
• Planned procedures
TOP FOUR REASONS FOR WHICH SPECT MPI, CTA, STRESS MR AND STRESS ECHO ARE RARELY APPROPRIATE

1. Initial Evaluation: Symptomatic patients with low pre-test probability and no high risk factors who can exercise and have an interpretable ECG (SPECT MPI, CTA, and stress MR only)
   • Case Example: Women without high risk factors and less than 50 years old with atypical or non-anginal chest pain or between 50 - 60 years old with non-anginal chest pain

2. Initial Evaluation: Asymptomatic patients with low global CAD risk
   • Case Example: Men less than 45 years old and women less than 55 without a history of smoking, hypertension, family history, high HDL or low HDL

3. Post PCI: Asymptomatic patients less than 2 years after PCI
   • Case Example: Annual scheduled SPECT MPI after PCI

4. Preoperative evaluation: Prior to low risk surgery
   • Case Example: Preoperative screening prior to cataract surgery

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