EVALUATION AND IMPROVEMENT OF SPECT APPROPRIATENESS CRITERIA WITH CLINICAL OUTCOMES: A LONG-TERM FOLLOW-UP STUDY

Poster Contributions
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SPECT Appropriateness Criteria (AC) has been established for quality of care since 2005. Our prior study showed AC predictive powers (AHA 2011:239), but no data on long-term follow-up in pts with appropriate (A) or inappropriate (I). This study sought to evaluate AC effectiveness using major adverse cardiac events (MACE) in 1-year follow-up.

Methods: All pts with SPECT during 1-year were included. Out-pt visits were retrospectively evaluated prior to SPECT referral using 2009 AC to determine A, I, or uncertain (U). MACE was followed for 1-year.

Results: Of 65,922 consecutive pts, 924 had SPECT. No significant MACE (n=59, 6.4%) between A and I (HR 1.23, p=0.47) over 1 year. Predictive A's were: A30-New/worsening symptoms with abnormal prior imaging (26%, OR 5.65, p <0.001), and A55-Symptomatic pts post PCI or CABG (10%, OR 1.89, p=0.06). However, A43-Preop with ≥ 1 risk factor and <4 METS had a low MACE (3%, OR 0.4, p=0.3). Furthermore, relative high MACE was seen in I13-Intermediate CHD risk (15%, OR 2.79, p=0.07), I27-Asymptomatic, known CAD, prior stress test < 2 years (9%, OR 1.39, p=0.59), and I59-Asymptomatic pts < 2 years after PCI/CABG (11%, OR 1.89, p=0.24). Based on the MACE, 4 ACs were reclassified: A43 to I; I13, I27, and I59 to U. Reclassification resulted in significant delineation of MACE in A and I (HR 1.94, p <0.05).

Conclusion: Reclassifying some ACs may increase effectiveness of outcome predications. Further research on AC is warranted on clinical outcomes before AC is widely applied to clinical settings.