Nuclear Medicine Technologists Assessing Whether a Myocardial Perfusion Rest Study is Required - Evaluation of a New Routine

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Background

• Rest-study in Myocardial Perfusion Study (MPS) only when required

• Benefits
  – Reduce patient radiation exposure
  – Saving resources for the clinic
    • camera time
    • staff time for technologists and physicians
New Routine

Nuclear Medicine Technologists determine the need for a rest study

1. Education of technologists
2. Clinical evaluation and comparison with physicians
3. Implementation of New Routine
Aim

To evaluate if rest studies are performed more frequently after stress studies after the implementation of this New Routine
MPS protocol

- Ergometer or Adenosine stress
- Tc-99m Tetrofosmin
- Siemens E-cam
- Gated SPECT
- Attenuation correction
Step 1: Education of technologists

Training
• 82 cases with explanations;
  – Why ”need” or ”no need” for a rest study

Test
• 20 cases
• Maximum 1 ”mistake” was accepted
• All technologists passed the test
Step 2: Clinical evaluation and comparison with physicians

- Technologists
  - Review the stress MPS images
  - Classify as ”Rest – No Rest”
  - Call the physician

- Physician decide ”Rest – No Rest”

- 130 consecutive cases
- 96% agreement
Step 3: Implementation of New Routine

- Based on the good results from Step 1+2
- Implementation of the New Routine in November 2011
Methods

• Evaluation after implementation
• Differences in frequency of rest studies performed before and after implementation of the New Routine?
• Study periods
  – Before: Jan – Oct 2011
  – After: Nov 2011 – Mar 2012
Results

• Before “New Routine”
  – 1 141 stress MPS
  – Rest MPS required in 641 (56.2%)

• After “New Routine”
  – 553 stress MPS
  – Rest MPS required in 312 (56.4%)

• No statistically significant difference
Conclusion

• Properly trained technologists are able to decide whether a rest study is required or not
• Better effectiveness in our department
• Both technologists and physicians are satisfied with the new routine