Does the receiver of a myocardial perfusion report precisely understand the message? A pilot study

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Conclusions

For ischemia, the two physicians agreed well on the interpretation. For infarction, the cardiologist often interpreted the report in favour of infarction where the physician in NM was less certain. The disparate classifications were most obvious when the "conclusion section" of the report did not state either "infarction" or "no infarction" due to equivocal examinations. These results demonstrate the need for structured reports in order to avoid misunderstandings in interpretations of MPS.

Purpose

It is of great importance that the treating clinician understands the report written by the physician at the department of nuclear medicine (NM). The aim of the study was to investigate whether a referring physician interprets the final report of a myocardial perfusion scintigram (MPS) the same way as the physician responsible for the interpretation of the examination does.

Methods

Twenty-five MPS were selected of which only five were completely normal examinations. The physician at the department of NM who interpreted the examinations and wrote the reports participated in the study, as well as a cardiologist. The two physicians independently classified the examinations on the presence/absence of ischemia/infarction, based on the final report, in grades of 1-5 (1 = No ischemia/infarction, 2 = Probably no ischemia/infarction 3 = Equivocal, 4 = Probable ischemia/infarction, and 5 = Certain ischemia/infarction). When ischemia and/or infarction were thought to be present in the left ventricle, the physicians were asked to mark the involved segments. Kappa statistics were used to measure agreement between the physicians.

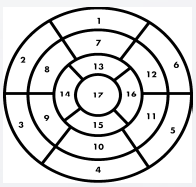
Results

The agreement of classifications between the two physicians was better for ischemia (kappa statistics 0.69) than for infarction (kappa statistics 0.35). For ischemia, the physicians agreed on the classification in 20 patients. In the remaining five, the classifications differed from 1 to 2 or from 4 to 5. In all patients, the suggested area of ischemia was very similar, except in one case. As for infarction the results were more disparate. In 16 of the cases the two physicians agreed completely or from 1 to 2 or from 4 to 5. In one patient the cardiologist classified a 4 and the physician in NM a 2. In three patients, the cardiologist classified a 4 and the physician in NM a 3. In all these cases, the final report did not state infarction/no infarction in the "conclusion section". In the "finding section" words such as "mild reduction in myocardial perfusion" or "uneven distribution" were used.

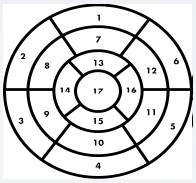
Questionnaire:

Dr (mark):
Resident/Specialist Nuclear Medicine/Cardiology

Is ischemia present? If probable/certain ischemia – where? (mark the involved segments)
1 No ischemia
2 Probably no ischemia
3 Equivocal
4 Probable ischemia
5 Certain ischemia



Is infarction present? If probable/certain infarction – where? (mark the involved segments)
1 No infarction
2 Probably no infarction
3 Equivocal
4 Probable infarction
5 Certain infarction



Left ventricular segmentation:

1. Basal anterior	2. Basal anteroseptal	3. Basal inferoseptal
4. Basal inferior	5. Basal inferolateral	6. Basal anterolateral
7. Mid anterior	8. Mid anteroseptal	9. Mid inferoseptal
10. Mid inferior	11. Mid inferolateral	12. Mid anterolateral
13. Apical anterior	14. Apical septal	15. Apical inferior
16. Apical lateral	17. Apex	

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