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Safety And Practices During Adenosine Stress Cardiac Magnetic Resonance In COPD: A 3-year Experience From A Tertiary Referral Centre.
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Introduction and Rational
COPD is a multi-system disorder with significant cardiac morbidity and mortality, much of which is undiagnosed1. An increasing awareness of this may prompt further referrals to exclude coronary artery disease. Increasingly Cardiovascular Magnetic Resonance (CMR) adenosine perfusion imaging (PI) is being used to assess ischaemic heart disease.

Aim
To look at patterns of referral, safety and practices of CMR PI in COPD.

Method
54 consecutive COPD patients who underwent CMR between 2008-2011 were identified from the hospital imaging registry and a retrospective record review performed.

Demographics
| Age (years) | 67.0±8.1 |
| Males: Females | 41:13 |
| FEV (ml) | 1299±565 |
| FEV% | 47.5±19.7 |
| FVC (ml) | 2409±925 |
| FVC% | 68.7±19.9 |
| FEV/FVC | 54.9±12.7 |

Reasons given for not proceeding with PI
- Asthma
- Claustrophobia
- "Airways Disease"
- COPD

Outcomes of Referral
- Only 8/14 had lung function available at the time of the scan
- Comparing PFTs subsequently (31/44):
  - FEV1%: 50.3±20.9 vs 45.3±6.0, P=0.37
  - FEV/FVC: 54.4±12.5 vs 56.1±4.2, P=0.78
- 9.7% of those referred incorrectly labeled with airflow obstruction

Conclusions
- The use of PI in COPD is increasing.
- Concerns over safety persist but appear unfounded
- Over-precaution and lack of accompanying lung function data at referral may result in suboptimal management of this high-risk group.

References:
1. IS Stone, NC Barnes, SE Petersen Heart 2012;98:1055-106

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