USEFULNESS OF THE STUDY MYOCARDIAL PERFUSION WITH DIPYRIDAMOLE IN CLINICAL PRACTICE

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METHODOLOGY

To evaluate coronary artery disease (CAD) in patients with myocardial ischemia, we studied the effectiveness of a new technique, which involves the use of a combination of stress and rest imaging with dipyridamole (SPECT). This method provides more accurate and reliable information about the presence and severity of CAD, thus aiding in the selection of appropriate therapeutic options.

RESULTS

10% of the SPECT did not require modification of the automatic method. The percentages of patients who did not require modification ranged from 0.55% in LV and total rest perfusion defect (LRP) to 2.56% in MIP.

Correlation between automatic and manual methods for LV and EDV values were 0.87 and 0.89. The agreement between methods was excellent (p<0.0001). Regarding LV, correlation in Group A was 0.81, in Group B, 0.89, and in Group C, 0.80.

CONCLUSION

Quality control of automatic technique is necessary in all gated myocardial SPECT in order to ensure the correct interpretation of results and improve patient management. Patients with abnormal perfusion, ischemia at rest and left ventricular dysfunction should be referred for further evaluation.
DRAFTING AND IMPLEMENTING A PROCEDURE GUIDELINE FOR THE INVESTIGATION OF HIBERNATING MYOCARDIUM IN A RESOURCE-CONSTRAINED SETTING

A. Doruyter, A. Ellmann, J. Warwick, J. Holness
Stellenbosch University and Tygerberg Hospital, Cape Town, South Africa

INTRODUCTION

METHODS

RESULTS

CONCLUSION

REFERENCES
Production & quality assurance of $^{13}$NH$_3$ ammonia in a busy PET-CT centre for myocardial viability studies

Department of Nuclear Medicine, All India Institute of Medical Sciences, New Delhi: 110029, India


Introduction

1. Rational Nitrogen ($^{13}$N) is a radionuclide of nitrogen used in positron emission tomography (PET) for assessing myocardial perfusion. The $^{13}$N-N$_2$ molecule is administered, and the resulting $^{13}$N-bearing compounds are employed for PET imaging.

Material & Method

The nuclear reaction in the production of $^{13}$N from $^{14}$N is used. The process involves a nuclear reaction in which a neutron is converted into a proton, releasing a beta particle and an antineutrino. This process is used to produce $^{13}$N, which is then used in PET imaging for myocardial perfusion studies.

Conclusion

Suitable to have excellent myocardial perfusion studies using $^{13}$N ammonia and after 30 minutes using a combination of the two to assess the myocardial viability and function.
Highlights

J. V. Vitola
# Poster Panel – 14 awards

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CV Disease: A Major Threat to Public Health

International Atomic Energy Agency

João V. Vítolo, MD, PhD
Cardiologist and Nuclear Medicine Physician

QUANTAL Diagnostico & Terapia, Curitiba - Brazil
Consultant IAEA, Vienna - Austria
Chairman International Advisory Panel, ASNC, USA
International Conference on Integrated Medical Imaging in Cardiovascular Diseases - 2013

Paola Smario MD, PhD
Professor of Cardiology and Nuclear Medicine
Director of the Nuclear Medicine and PET/CT Center
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Fleury Medical Center - São Paulo Brazil
DIAGNOSTIC ESTRATEGY

- AVAILABILITY
- GUIDELINES/APPROPRIATNESS CRITERIA
- CLINICAL EXPERTISE
- OBJECTIVE OF THE STUDY AND PRETEST LIKELIHOOD
- CHARACTERISTICS OF THE METHOD X PATIENT (asthma, acoustic window, limitation to exercise)
- SINGLE METHOD X ASSOCIATION OF METHODS
History of Echocardiography

- 1941 – 1st medical use of ultrasound
- 1950 – 1st attempt to measure cardiac output using an industrial ultrasound used to detect cracks in metals

An Austrian: K. T. Dussik
Father of diagnostic ultrasound
Transesophageal Echo

- Only technique for visualising thrombus in the left atrial appendage with high sensitivity & specificity
- Miniaturized Single Plane Probe also available; decreases need for sedation
- Real-time 3D: better visualization of commissural anatomy and mitral valve leaflet tear
No conflict of interest

This talk deals with techniques used in clinical daily routine

All of the indications for cardiac MRI are within national/international guidelines

J. Lotz, UMG Göttingen, Germany
www.umin-godolin.de

The Ganshuisel, Göttingen, Germany