

## False Negative Image for Ischemia with Spect Myocardial Perfusion with <sup>99m</sup>Tc. Tetrofosmin, with Suspected Severe Ischemia

Pineda-Tovar Ma Amparo<sup>1</sup>, Arela-Quispe, Liz Mayda<sup>2</sup>, Hernández López Sergio<sup>2</sup>

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**Introduction:** Coronary artery disease (CAD) is the cause of death in adults in Mexico and in the world. Its timely detection allows to establish an optimal treatment. SPECT-GATED myocardial perfusion studies play an important role in its diagnosis, with them it is possible to analyze coronary perfusion, mobility and thickening of the walls of the left ventricle. Those that are strong evidence of coronary artery disease. Hypertrophy of the left ventricle is dilation and thickening (hypertrophy) of the left ventricle walls. Left ventricular hypertrophy is more common in people who have uncontrolled high blood pressure. In this case Interesting of:

Female patient, 64 years, DM2, 30 years of evolution. Stress angina 8 months ago, shortness of breath, tiredness, chest pain, dizziness. Calcium Score: 3748 AU, LVEF: 68%, Mild mitral insufficiency, mild mitral stenosis, sent to perform myocardial perfusion protocol-SPECT.

**Material and Method:** SPECT Myocardial Perfusion with <sup>99m</sup>Tc. Tetrofosmin showed perfusion images without evidence of perfusion defect or ischemia. But with transient dilation and pulmonary uptake. Abnormal radioisotope uptake in lungs.

Cardiac catheterization showed: TCI: trifurcated, short, without significant angiographic lesions. DA: maximum narrowness 90% in the proximal segment. First diagonal branch: 90% ostio-proximal lesion. Intermediate branch: vessel less than 2mm, ostio-proximal 90% lesion. CX: 75% eccentric lesion in the distal segment, first marginal obtuse branch with 75% ostial lesion. CD: posterior descending with 75% lesion in the middle third.

**Conclusión:** Myocardial-SPECT perfusion studies are used as a non-invasive functional enriched for diagnosing coronary artery diseases. And they have enormous predictive value for ischemic events. Influencing the selection for invasive procedures or medical treatment, in order to establish a timely, optimal treatment for the patient and improve their survival

False negative results can be caused by multiple vessel disease or severe ischemia as in this case. In which we observed a homogeneous perfusion in both phases of the myocardial-SPECT perfusion study, there are no areas with lesions that suggest ischemia or infarctions. Most of the time, images with thickened walls suggestive of concentric type hypertrophy are observed. However, there is transient dilatation of the LV cavity, usually greater than 1.20, dilatation of the LV in both phases of the study that suggest the presence of severe ischemia.

It is very important to evaluate the risk factors (diabetes mellitus, high blood pressure, obesity, lifestyle, sedentary, smoking, obesity, hipercolesterolemia and patient symptoms.

**Purpose:** To examine factors related to related to resonance (MR) intramission studies among the big prospective Clinical analysis of adult male imaging in arteria coronaria disease (CEMARC) study population. heart muscle intramission adult male has wonderful diagnostic accuracy to sight coronary cardiopathy (CHD). However, causes of false-negative adult male intramission studies aren't well understood.

**Materials and ways:** CEMARC prospectively recruited patients with suspected CHD and mandated adult male, heart muscle intramission scintigraphy, and invasive roentgenography. This subanalysis known all patients with important coronary stricture by quantitative coronary roentgenography (QCA) and adult male intramission (1.5T, T1-weighted gradient echo), victimisation the first blind image browse. we have a

tendency to explored patient and imaging characteristics associated with associated with intramission results, with relation to QCA. variable multivariate analysis assessed the chance of false-negative adult male intramission in keeping with four characteristics: poor image quality, triple vessel illness, inadequate hemodynamic response to nucleoside, and Duke peril score (angiographic myocardium-at-risk score).

**Results:** In all, 265 (39%) patients had important angiographic illness (mean age sixty two, 79% male). Thirty-five (5%) had false-negative and 230 (34%) true-positive adult male intramission. Poor adult male intramission image quality, triple vessel illness, and inadequate hemodynamic response were similar between false-negative and true-positive teams (odds quantitative relation, OR [95% confidence interval, CI]: 4.1 (0.82–21.0), P=0.09; 1.2 (0.20–7.1), P=0.85, and 1.6 (0.65–3.8), P=0.31, respectively). Mean Duke peril score was considerably lower within the within the (2.6±1.7 vs. 5.4±3.0, OR 0.34 (0.21–0.53), P<0.0001).

**Conclusion:** False-negative vas adult male intramission studies square measure uncommon, and additional common in patients with lower angiographic myocardium-at-risk. In CEMARC, poor image quality, triple vessel illness, and inadequate hemodynamic response weren't considerably related to false-negative adult male intramission. J. MAGN. RESON. IMAGING 2016;43:566–573.

Coronary cardiopathy (CHD) is that the most frequent explanation for death in developed countries.1 heart muscle intramission resonance imaging (MRI) is Associate in Nursingd more} used as an correct and duplicable technique for noninvasive designation of coronary cardiopathy (CHD). Its potential blessings embrace an absence of radiation exposure, cost effectiveness, and extra data on internal organ anatomy, function, and tissue viability once performed as a part of a multiparametric protocol.2, three resonance (MR) intramission imaging has high sensitivity and specificity as compared to xray coronary roentgenography.4 what is more, a traditional adult male intramission scan confers wonderful wonderful term prognosis.5

False-negative intramission adult male studies square measure a vital limitation of the tactic, reportable to occur in 16% of cases and probably denying patients applicable revascularization treatment.6 Reasons for false-negative intramission adult male studies embrace suboptimal image quality, technical failure, and also the inconsistent relationship between angiographic stricture severity and heart muscle anaemia in studies victimisation angiographic endpoints.7 seven adult male studies square measure troublesome to spot and appraise, partly thanks to the big variety of patients needed for such Associate in Nursing analysis and also the lack of normalized|an identical|the same|a regular|an even} reference standard applied to patients with negative noninvasive imaging, with potential for patient choice bias in clinical populations. The Clinical analysis of resonance imaging in arteria coronaria disease (CEMARC) study prospectively registered 752 patients with suspected CHD, providing an oversized and homogenised patient population for subanalyses.8, nine All patients in CEMARC were scheduled to endure adult male and heart muscle intramission scintigraphy victimisation single photon emission computerized axial tomography (SPECT) (in a randomised order) and picture taking coronary roentgenography,10 and also the study was notable in having each an oversized study population and normalized|an identical|the same|a regular|an even} reference standard applied to any or all patients, together with those with negative noninvasive imaging. The CEMARC dataset is probably suited to explore factors related to false-negative adult male intramission leads to an oversized prospective population, and was studied for this purpose.

<sup>1</sup>Cardiología Nuclear. Centro Médico Nacional Siglo XXI

<sup>2</sup>Área PET del Servicio de Medicina Nuclear Instituto Nacional de Cancerología-INCAN