



Abstract

Heart disease is one of the cause's numbers of death in the world, if the heart could not pump blood and distribute it to all parts of the body; pain in the chest will happen while heavy work or walk a rush. Myocardial perfusion imaging (MPI) techniques is an ideal approach to doing the assessments of myocardial perfusion as non-invasive imaging modalities; it can examine the functions of the various segments of the heart muscle to reflect whether there is a malfunction of the heart.

Estimation of myocardial perfusion imaging in SPECT scintigraphy using Tc99m sestamibi, patient sample one hundred- ninety three suspected heart disease examined by SPECT scintigraphy in rest and stress conditions . the result shows that Estimation of stress myocardial perfusion characterize to three mode of blood perfusion (end-diastolic, end-systolic volumes and ejection fraction), and estimated well by the linear equation for the three mode of blood perfusion, and from the patients information such as age and body mass index can estimate the rest myocardial perfusion from patient's information without need it to rest scan by 99mTc sestamibi.

Study concluded that can estimate of stress myocardial perfusion from rest condition without need to stress the patients, as well as estimated of rest myocardial perfusion from patient information.

المستخلص

مرض القلب هو واحد من الأسباب التي تسبب الموت في العالم إذا كان القلب لا يمكن ضخ الدم وتوزيعه على جميع أجزاء الجسم. فان ألم في الصدر سيحدث أثناء العمل الثقيل أو المشي باندفاع. تقنيات نضح عضلة القلب (مبي) هو نهج مثالي لإجراء تقييمات نضح عضلة القلب كما يعتبر من طرق التصوير غير المؤذية. فإنه يمكن فحص وظائف مختلف شرائح عضلة القلب لتعكس ما إذا كان هناك خلل في القلب.

تقدير التصوير نضح عضلة القلب في التصوير المقطعي الاحادي باستخدام تكنيتيوم سيستامبيي، عينة المرضى هي مائة ثلاثة وتسعين يشتبه بان لديهم أمراض القلب تم فحصها من قبل التصوير المقطعي الاحادي في الراحة وظروف الإجهاد. أظهرت النتائج أن تقدير نضح عضلة القلب في الإجهاد يميز بثلاثة أنماط من نضح الدم (نهاية الانبساط، ونهاية الانقباضي وجزء طرد)، ويقدر جيدا من خلال المعادلة الخطية للأوضاع الثلاثة من نضح الدم، ومن معلومات المرضى مثل العمر ومؤشر كتلة الجسم يمكن تقدير بقية نضح عضلة القلب من معلومات المريض دون الحاجة إلى المسح في وضع الراحة بواسطة تكنيتيوم سيستامبيي.

وخلصت الدراسة إلى أن تقدير نضح عضلة القلب في حالة الإجهاد من حالة الراحة دون الحاجة إلى الاجهاد على المرضى، إضافة إلى تقدير نضح عضلة القلب في الراحة من معلومات المريض.

Dedication

I dedicate this research to my:

Lovingparent,

Sisters,

Wife,

Friends

Children (Fatima,&Rawan)

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*I would like to thank Allah for giving me the patience and the strength to finish this research; I owe a debt of thanks and appreciation to **Dr.***

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Abbreviations

CVD	Cardiovascular disease
SPECT	Single photon emission computed tomography
^{99m}Tc	Technetium 99m
MPS	Myocardial perfusion scan
CAD	Coronaryartery disease
LVEF	left ventricular ejection fraction
IV	Intravenous
AV	Atrioventricular
ECG	Electrocardiogram
MI	Myocardial Infarction
PET	Positron emission tomography
ROI	region of interest
NPO	Nothing per oral
RAO	Right anterior oblique
LPO	Left posterior oblique
BMI	Body max index
SPSS	Social science program
EDV	End-diastolic volume
ESV	End-systolic volume
EJ	Ejection fraction
SD	Stander deviation
IHD	Ischemic heart disease

DM	Diabetes mellitus
CABG	Coronary artery bypass grafting
CKD	Chronic kidney disease