

Clinical Trial Protocol

Iranian Registry of Clinical Trials

16 Sep 2026

The comparison of radiation dose of coronary computed tomography angiography with 100 and 120 kilo voltage in patients with body mass index less than 29

Protocol summary

Summary

The aim of this study was to compare patient radiation dose in coronary computed tomography angiography in 100 and 120 kilo Voltage in those with Body Mass Index less than 29. Inclusion criteria is weight below 85 kg, body mass index less than 28 kg/m² and exclusion criteria are coronary calcium score greater than the maximum limit of Computed Tomography Angiography (300 (Agatston Units) in a vessel or in total vessels Agatston Units 1200). Population of this study are patients those refer to Golestan hospital for coronary CT angiography. Our study cases is 114 patients. our intervention is reduction of Computed tomography voltage. primary outcome is changing amount of patient radiation dose that measure immediately after the intervention.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2013121015750N1**

Registration date: **2014-07-05, 1393/04/14**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2014-07-05, 1393/04/14

Registrant information

Name

Seyyed Mohammad Ali Maashi

Name of organization / entity

Ahvaz Jondi shapour University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 61 1374 3154

Email address

smamaashi2479@gmail.com

Recruitment status

Recruitment complete

Funding source

Ahvaz Jondi Shapour University of Medical Sciences

Expected recruitment start date

2013-12-22, 1392/10/01

Expected recruitment end date

2014-04-20, 1393/01/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The comparison of radiation dose of coronary computed tomography angiography with 100 and 120 kilo voltage in patients with body mass index less than 29

Public title

The comparison of radiation dose of coronary computed tomography angiography with 100 and 120 kilo voltage in patients with body mass index less than 29

Purpose

Prevention

Inclusion/Exclusion criteria

inclusion criteria :patients who are candidates for coronary Computed Tomography Angiography in Ahwaz Golestan Hospital ; having conscious satisfaction ;weight under 85 KG; have a body mass index less than 28 ; exclusion criteria :Patients with body weight above 85 kg; Body Mass Index higher than 28; coronary calcium score greater than the maximum limit of Computed

Tomography Angiography (300 (Agatston Units in one vessel or in total 1200 Agatston Units);renal dysfunction (serum creatinine greater than 1.3 mili grams per deciliter); hyperthyroidism; Known hypersensitivity reaction to iodine-containing contrast agents; Pregnancy

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 50

Randomization (investigator's opinion)

Randomized

Randomization description**Blinding (investigator's opinion)**

Double blinded

Blinding description**Placebo**

Not used

Assignment

Other

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ahvaz University of Medical Sciences Ethics Committee

Street address

Central Library, University of Medical Sciences of Ahvaz, Golestan

City

Ahvaz

Postal code**Approval date**

2014-01-25, 1392/11/05

Ethics committee reference number

ajums.rec.1392.272

Health conditions studied**1****Description of health condition studied**

cardiac diseases

ICD-10 code

I20,I21,I2

ICD-10 code description

Ischaemic heart diseases

Primary outcomes**1****Description**

Patient radiation exposure dose

Timepoint

Immediately after intervention

Method of measurement

Using the formula Dose Length Product * E - mili Sivert

Secondary outcomes**1****Description**

Image Quality

Timepoint

Immediately after study

Method of measurement

with Contrast to Noise Ratio, IMAGE NOISE (Hounsfield units),Signal to Noise Ratio,Image Quality

Intervention groups**1****Description**

control group:62 patients-using 120 kilo voltage for Computed Tomography Angiography(standard setting) for one time

Category

Other

2**Description**

Intervention group:52 patients-using 100 kilo voltage for Computed Tomography Angiography for one time

Category

Other

Recruitment centers**1****Recruitment center****Name of recruitment center**

Golestan Hospital

Full name of responsible person

Dr Mohammad Davodi

Street address

Golestan Hospital, Golestan, Ahvaz

City

Ahvaz

Sponsors / Funding sources**1****Sponsor**

Name of organization / entity
research of Ahvaz University of Medical Sciences

Full name of responsible person
DR Nader Saki

Street address
Central Library, Ahvaz University of Medical Sciences,
Golestan

City
Ahvaz

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?
Yes

Title of funding source
research of Ahvaz University of Medical Sciences

Proportion provided by this source
100

Public or private sector
empty

Domestic or foreign origin
empty

Category of foreign source of funding
empty

Country of origin

Type of organization providing the funding
empty

Person responsible for general inquiries

Contact

Name of organization / entity
Ahvaz Jondi Shapour University of Medical Sciences

Full name of responsible person
Dr Mohammad Davodi

Position
radiology specialist

Other areas of specialty/work

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report

empty

Analytic Code

empty

Data Dictionary

empty