Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects of arm crank exercises on Dyspnea, Left Ventricular Ejection Fraction and exercise capacity in patients with angioplasty.

Protocol summary

Study aim
Primary Objective: To evaluate the effects of arm crank exercises on Dyspnea, Left Ventricular Ejection Fraction and exercise capacity in patients with angioplasty. Secondary Objective: To evaluate the effects of arm crank exercises on hemodynamic parameters (heart rate and blood pressure)

Design
Randomized Controlled Trial

Settings and conduct
Cheema Hospital Gujranwala

Participants/Inclusion and exclusion criteria
Inclusion Criteria: Patients having planned angioplasty Both male and female patients Post extubation Signed written informed consent Age 40-60years(15) Exclusion Criteria: PCI to nonnative vessel Implantation of >3 stents Evidence of thrombus Presence of infection Ejection fraction <30%(16)

Intervention groups
Group A: Patients will be treated by standard angioplasty medical protocol. Group B: Patients will be treated by using arm ergometer.

Main outcome variables
Dyspnea Left Ventricular Ejection Fraction Exercise capacity Hemodynamic parameters (heart rate and blood pressure)

General information

Reason for update

Acronym
Effects of arm crank exercises in patients with angioplasty.

IRCT registration information
IRCT registration number: **IRCT20191117045462N15**
Registration date: **2024-07-19, 1403/04/29**
Registration timing: **prospective**
Last update: **2024-07-19, 1403/04/29**
Update count: **0**

Registration date
2024-07-19, 1403/04/29

Registrant information

Name
Wajeeha Zia

Name of organization / entity
Riphah International University

Country
Pakistan

Phone
+92 42 35126110

Email address
wajeeha_z@yahoo.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2024-08-15, 1403/05/25

Expected recruitment end date
2024-12-15, 1403/09/25

Actual recruitment start date
2024-08-15, 1403/05/25

Actual recruitment end date
2024-12-15, 1403/09/25

Trial completion date
2025-02-15, 1403/11/27

Scientific title
Effects of arm crank exercises on Dyspnea, Left Ventricular Ejection Fraction and exercise capacity in patients with angioplasty.

Public title
Effects of arm crank exercises on Dyspnea, Left Ventricular Ejection Fraction and exercise capacity in patients with angioplasty.

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Patients having planned angioplasty Both male and female patients Post extubation Signed written informed consent Age 40-60years

Exclusion criteria:

PCI to nonnative vessel Implantation of >3 stents Evidence of thrombus Presence of infection Ejection fraction <30%(16)

Age

From **40 years** old to **60 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant
- Investigator

Sample size

Target sample size: **42**

Actual sample size reached: **42**

Randomization (investigator's opinion)

Randomized

Randomization description

Taking into account the above mentioned inclusion and exclusion criteria, patients will be recruited in the study through convenient sampling technique and then will be randomly assigned to each group through Random Sampling sealed opaque enveloped. Labeled as 1 Group A and 2 for Group B

Blinding (investigator's opinion)

Double blinded

Blinding description

Both patient and assessor physiotherapist will be blinded. Although the consent form will be taken from the patient. But the patient will not be aware of the study. Accessor physiotherapist will be involved in the study. He or She must have 2- or 3-year experience in relevant domain. He will access the patient by study defined outcome measure tools before the start and at the end of study.

Placebo

Used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Riphah college of rehabilitation & Allied Health Sciences

Street address

25 Raza Saeed Rd, Bhabra Block M Gulberg III, Lahore, Punjab 25-M Block, Lahore

City

Lahore

Postal code

54660

Approval date

2024-07-04, 1403/04/14

Ethics committee reference number

RCS&AHS/REC/MS-CPPT

Health conditions studied

1

Description of health condition studied

Angioplasty

ICD-10 code

Z98.6

ICD-10 code description

Angioplasty status

Primary outcomes

1

Description

Dyspnea

Timepoint

pre and post

Method of measurement

Borg Scale

2

Description

Left Ventricular Ejection Fraction

Timepoint

pre and post

Method of measurement

Echocardiography

3

Description

Exercise capacity

Timepoint

pre and post

Method of measurement

Duke Activity Status Index

Secondary outcomes

1

Description

Hemodynamic parameters

Timepoint

pre and post

Method of measurement

Heart Rate and Blood Pressure

Intervention groups

1

Description
Control group: Standard angioplasty medical protocol.
Category
Rehabilitation

2

Description
Intervention group: Arm ergometer
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Cheema Hospital Gujranwala
Full name of responsible person
Zainab Butt
Street address
Zia ul Haq Rd, Civil Lines, Gujranwala
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
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Full name of responsible person
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Grant name
Nill
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Riphah International University
Proportion provided by this source
15
Public or private sector
Private
Domestic or foreign origin
Domestic
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
Academic

Person responsible for general inquiries

Contact
Name of organization / entity
Expert Consultant Clinic
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Muhammad Umer Arshad
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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
No - There is not a plan to make this available
Justification/reason for indecision/not sharing IPD
There is no further information.
Study Protocol
Undecided - It is not yet known if there will be a plan to make this available
Statistical Analysis Plan
Undecided - It is not yet known if there will be a plan to make this available
Informed Consent Form
Undecided - It is not yet known if there will be a plan to make this available
Clinical Study Report
Undecided - It is not yet known if there will be a plan to make this available
Analytic Code
Undecided - It is not yet known if there will be a plan to make this available
Data Dictionary
Undecided - It is not yet known if there will be a plan to make this available