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Clinical benefits of additional resistance-type exercise during an endurance-type exercise intervention in coronary artery disease patients

Submission date 14/01/2010	**Recruitment status** No longer recruiting	[_] Prospectively registered [_] Protocol
Registration date 09/02/2010	**Overall study status** Completed	[_] Statistical analysis plan [_] Results
Last Edited 09/02/2010	**Condition category** Circulatory System	[_] Individual participant data [_] Record updated in last year

Plain English summary of protocol
Not provided at time of registration

Contact information

Type(s)
Scientific

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Additional identifiers

Protocol serial number
07.48/cardio07.081

Study information

Scientific Title
Clinical benefits of additional resistance-type exercise during an endurance-type exercise intervention in coronary artery disease patients: a randomised controlled trial

Acronym
STIMCARE

Study objectives
We hypothesise that by adding resistance-type exercise during an endurance-type exercise intervention, significantly greater clinical benefits are achieved in coronary artery disease patients.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Medical Ethical Committee of Jessa Hospital approved on the 29th January 2007 (ref: 07.48 /cardio07.081)

Study design
Prospective randomised clinical trial

Primary study design
Interventional

Study type(s)
Quality of life

Health condition(s) or problem(s) studied
Coronary artery disease

Interventions
All subjects exercised under close supervision of experienced physiotherapists three days per week for a total duration of six weeks in the cardiac rehabilitation centre of the hospital. Exercise training intensity was determined by baseline VO2 peak assessment: subjects exercised at a heart rate corresponding to 65% of baseline VO2 peak, for 40 minutes each exercise training session (17 minutes cycling, 13 minutes walking, 10 minutes arm cranking). Subjects were randomly (by coin) assigned to an endurance-training group, or combined endurance and strength-training group.

Intervention Type
Other

Phase
Not Applicable

Primary outcome(s)
1. Maximal exercise capacity
2. Sub-maximal exercise capacity
3. Muscle strength
4. Blood plasma lipid profile and glycaemic control
5. Habitual activity level

These measurements were executed at entry of rehabilitation, and after 7 weeks of rehabilitation.

Key secondary outcome(s))
1. Blood endothelial progenitor cell
2. Cytokine content

These measurements were executed at entry of rehabilitation, and after 7 weeks of rehabilitation.

Completion date
01/03/2010

Eligibility

Key inclusion criteria
60 coronary artery disease (CAD) patients (aged between 45 - 80 years, either sex) agreed to participate in this study.

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Key exclusion criteria
1. Complicated hospitalisation (renal failure, sepsis)
2. Delayed and/or complicated sternum healing
3. Hypertension (greater than 150 mmHg systolic blood pressure at rest and/or greater than 250 mmHg systolic blood pressure during exercise)
4. Presence of pulmonary and renal co-morbidity
5. Peripheral artery disease
6. Orthopaedic limitations
7. Subjects presenting myocardial ischaemia and/or severe ventricular arrhythmias during baseline exercise testing

Date of first enrolment
01/02/2008

Date of final enrolment
01/03/2010

Locations

Countries of recruitment
Belgium

Study participating centre
Jessa Hospital
Hasselt
Belgium
3500

Sponsor information

Organisation
Heart Centre Hasselt vzw (Belgium)

ROR
https://ror.org/03tw90478

Funder(s)

Funder type
Hospital/treatment centre

Funder Name
Heart Centre Hasselt vzw (Belgium)

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes