as much of such activity normally takes place at the day-care center rather than in the home.

Concerning the relevance and content of the items for use in Sweden, and therefore the applicability of the American normative data, a few items bought to light minor but nonetheless significant differences between Sweden and the U.S. This was reflected in the necessity to explain before Swedish parents could properly understand certain items. One example is tooth brushing, where performance by Swedish children naturally differs, as Swedish parents habitually supervise their children to this respect much longer than do American parents. Another example is bath transfer, as taking showers is far more common than tub bathing in this country. One item meeting from the PEDI, but very important in Sweden, is bicycle riding skills. Thus, for use in our country, the PEDI might benefit from some modification with regard to such national differences.

Other factors may also affect performance and therefore the results obtained. For instance, the differences noted among Swedish parents in perceiving their children to assume responsibility for their own care and to exercise self-determination in daily routines may not so much be explained by the presence or absence of siblings. Moreover, psychosocial factors may also be determinants of capacity and performance. Taken together with the cross-cultural differences mentioned above, such factors stress the fact that the assessment of function in children is a multifaceted and complex task.

The overall purpose of the PEDI is to detect the presence, extent and nature of functional deficit or developmental delay, to monitor individual or group progress, and to assess the outcome or efficacy of paediatric rehabilitation or service programmes. The present study showed strong correlation between the results obtained for non-disabled Swedish children and the corresponding American normative data, both on the functional skills and caregiver assistance scales. Thus, the PEDI would appear to be a useful instrument for the evaluation of functional performance in children with disabilities, both in clinical and research contexts. The results obtained in the present series suggest that the American normative data are applicable for reference when the PEDI is used in Sweden for children aged 2.0-6.9 years.

ACKNOWLEDGEMENTS

This study was supported by grants from the Göteborgs Stiftelse för Anna och Olof von Tapias Minne (RBU), Skånska Barnhuset och Föreningen för Södra Åtvidaberg (PSA).

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EFFECTS OF ORGANIZED AEROBIC GROUP TRAINING IN ELDERLY PATIENTS DISCHARGED AFTER AN ACUTE CORONARY SYNDROME. A RANDOMIZED CONTROLLED STUDY

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From the Department of 1Physical Therapy and 2Cardiology, Karolinska Hospital, Karolinska Institute, Stockholm, Sweden

ABSTRACT

The aim of this study was to compare the physiological effects of an individually adjusted outpatient group training programme to the standardized recommendations of walking in elderly patients (65-85 years) discharged after an acute coronary episode in all. In total, 101 patients, 20 women and 81 men, aged 65-84 (mean 71) years, were randomized either to a supervised outpatient group training programme during three months (n = 50) or to a control group (n = 51). Exercise tolerance increased from 104 watts to 122 watts (p < 0.001) in the training group and from 102 watts to 117 watts (p < 0.001) in the control group. Self-assessed physical activity was higher in the patients in the training group than in the control group (p < 0.001), as was graded well-being (p < 0.05). Organized aerobic group training can easily be performed in elderly patients after acute coronary syndrome, with results of improved exercise tolerance and a higher self-assessed well-being.

Keywords: elderly, myocardial infarction, unstable angina pectoris, acute coronary syndromes, randomized controlled study, cardiac rehabilitation, training, physiotherapy.

INTRODUCTION

Despite the well-proven benefits of cardiac rehabilitation and exercise training, elderly patients with coronary heart disease are not frequently referred or encouraged to pursue cardiac rehabilitation and training programmes (4, 9). The maintenance of an active lifestyle among the elderly may facilitate social contacts, enhance physical and emotional health, reduce risk of chronic disease and conserve vital functions (12). Regular physical activity maintaining exercise tolerance and physical fitness is associated with lower mortality from all causes (2). In the early years of exercise rehabilitation of patients with coronary heart disease, age exceeding 65 years was mostly and arbitrarily considered to be an exclusion criterion (4). In 1985, Williams et al. (16) reported that men older than 65 years, who participated in an early training programme, initiated within six weeks after a myocardial infarction or coronary bypass grafting, increased their physical capacity and their psychological response to exertion as much as younger patients. Although older coronary patients may improve exercise capacity to an extent similar to that of younger patients (1, 15), no randomized, controlled trial, to our knowledge, has addressed the efficacy and safety of a programme for physical rehabilitation after coronary events in this age cohort. The aim of this prospectively randomized study was to evaluate the feasibility and physiological effects of an early individually adjusted aerobic outpatient group training programme in elderly patients after acute coronary syndrome.

MATERIALS AND METHODS

Material

The patient material comprised 309 consecutive patients aged >65 years (mean 71; SD 4.3) admitted to the coronary care unit at Karolinska Hospital, Stockholm, due to acute coronary syndrome during the period from October 1994 until June 1997. Acute coronary syndrome was defined as either an acute myocardial infarction (AMI, n = 64) or an episode of unstable angina pectoris (UAP) with anginal chest pain and dynamic ECG changes (transmural/T-wave inversion and/or ST depression >3 mm in at least two adjacent leads), but with no release of cardiac enzymes (n = 43). To be included, the patients had to be able to perform a pre-exercise test at a workload >70 watts in men and >50 watts in females. For the group with UAP, a ST-segment depression >3 mm in at least two adjacent leads had to be documented. Patients with neurological sequelae (n = 5), memory dysfunction (n = 3), orthopaedic disability (n = 7), inability to understand Swedish (n = 8), planned coronary intervention within three months (n = 27) and other complicating diseases (n = 10) were not considered eligible for the study. Sixty-five patients declined to participate in the study, mostly due to practical problems. Prior to discharge, all patients received verbal and written
Aerobic group training in elderly patients

Table I. Classification system of physical activity

1. Any physical activity.
2. Mostly sitting, sometimes a short walk, or the equivalent.
3. Light physical exercise less than 2 hours a week (walking, light gardening, fishing, light housework).
4. Light physical exercise around 2 hours a week (walking, light gardening, light aerobic training).

Inferior physical activity, capacity and well-being

Before randomization and for three months, the patients assessed their levels of physical activity on a six-grade scale (as presented in Table I). The achieved expectations of physical capacity were assessed in three months by means of a Visual Analog Scale (VAS) of 0-100, with the extremes “very good” and “not good at all”.

Results

The results are presented as mean, SD, range, or median and range when data were ordinal. Analyses were performed using unpaired Student’s t-test and Chi-square test or Wilcoxon’s signed rank test and Mann-Whitney test where data were ordinal. The predefined differences were assessed at p < 0.05.

Exercise capacity

Maximal exercise capacity was assessed on two occasions before randomization and three months thereafter. All tests were conducted with symptom limitation on exercise; all tests were performed on a treadmill (Borg’s Ratio scale (Borg 6-20) scale (4)). As the three tests were conducted within three months, the patients were instructed to consume meals (Borg 6-20) scale, Borg’s Ratio scale (Borg 6-20) scale (4).

Type of drug

Table II. Characteristics of the patients in the intervention group (Group A) and the control group (Group C) at time of randomization. Variables are presented as mean (n = 30) and (n = 51) of patients

Table III. Pharmacological treatment of the patients in the intervention group (Group A) and the control group (Group C) at randomization and after three months. Variables are presented as number (n) of patients

RESULTS

Fifty-six patients were randomized to Group I and 53 patients to Group C. Eighty patients withdrew from the study due to Coronary Artery Bypass Graft surgery (CABG) (n = 2); two from each group after 8, 9, 10 and 11 weeks, respectively. Patients were randomized to two consecutive operations or a SHAM operation was performed as well. The randomized RPE scale at the mean of the subtest was 10 and 20 watts. The patients were allowed to consume meals (Borg 6-20) scale, Borg’s Ratio scale (Borg 6-20) scale (4).

The pharmacological treatment did not differ significantly between the two groups at baseline, except for in the study intervention group. The average compliance (actually performed training sessions divided by possible sessions) in the intervention group was 87% (range 64-100%). There were no complications of any kind during the training sessions. Satisfactory recordings of heart rate during the training sessions were obtained from 48 patients. In the remaining 12 patients, proper recordings were not possible due to intermittent atrial fibrillation and frequent premature beats. Forty-one patients (82%) reached the target of an exercise intensity ≥80% of the estimated maximal oxygen uptake during ≥80% of the training sessions, while 55 patients reached the target of ≥80% of the estimated maximal oxygen uptake during ≥50% of the training sessions.

The average compliance (actually performed training sessions divided by possible sessions) in the intervention group was 87% (range 64-100%). There were no complications of any kind during the training sessions. Satisfactory recordings of heart rate during the training sessions were obtained from 48 patients. In the remaining 12 patients, proper recordings were not possible due to intermittent atrial fibrillation and frequent premature beats. Forty-one patients (82%) reached the target of an exercise intensity ≥80% of the estimated maximal oxygen uptake during ≥80% of the training sessions, while 55 patients reached the target of ≥80% of the estimated maximal oxygen uptake during ≥50% of the training sessions.
information about the importance of physical activity after an acute cardiac event. I.e. they were instructed to take a daily walk according to energy, increase the time and length of the walk gradually, start at a slower tempo and increase it after a while. All patients were also invited to monthly information meetings at our department. In this context, they had the opportunity to ask questions about their disease and how to cope with it, and about their pharmacological therapy. They could also discuss their problems with a professional team specializing in cardiac rehabilitation. All patients were encouraged to contact the team at any time during the study period. The medical follow-up at the outpatient clinic was the same for all patients. Patients were informed and included in the study before discharge from hospital. However, randomization was not done until after the baseline exercise test, performed within six weeks after the acute event. This protocol was chosen so that the allocation of individual patients to either study group would not in any way influence their performance at the baseline investigation. The median delay between initial hospital admission and the time of randomization was 18 days (range: 2 to 21 days (Group C). Before randomization (Group I) and 16 in the Control Group (Group C). Before randomization, the patients were stratified according to diagnosis, AMI or UAP. All patients gave their informed consent to participate. The study was approved by the Committee of Ethics at the Karolinska Hospital.

Training program

The training program consisted of a nurse/physio group training for 50 minutes (including warm-up and cool-down) three times a week for three months (108). All patients were supervised by a specialist physician/physio.

Two exercise tests were used:

1. An individual exercise intensity of ≥50% based on the relation between maximal heart rate and maximal oxygen uptake (11) for at least 40 minutes, and
2. 80% of the estimated maximal oxygen uptake during three months training, engaging large muscle groups for training the central circulation (17). The complete program was supported by music, which guided the intensity of the performance during the season. The duration of the program was presented in Table 1. The training effect on maximal heart rate was assessed at one of the three exercise testing sessions during weeks 3, 6 and 12 with a portable heart rate recorder (Sport Tester, Polar Electro Oy, Keiperi, Finland). Perceived exertion was evaluated using a 6–20 scale, Borg's Ratings of Perceived Exertion (RPE) scale (4) (1) of the three most intense exercise periods, as described above.

Exercise capacity

Maximal exercise capacity was assessed on two occasions before randomization and three months thereafter. All tests were conducted under symptom limitation on an electrically braked bicycle ergometer (Sofima Etro, Ergo 400, Sweden) lasting 30 s, with the effort increased by 10 W every minute (18). A 12-channel computerized electrocardiograph (Siemens Elema, Sweden) was used for the recording. Blood pressure was recorded throughout the test, and the subject was observed for signs of arrhythmias or ST segment depression ≥0.2 mm. The test was terminated due to fatigue, severe angina (grade ≥3), syncope, or a ST segment depression ≥0.2 mm. The graded RPE score at the two submaximal workloads of 50 and 70 W were analyzed as an indicator of the patient's tolerance to submaximal levels of exercise. These workloads were chosen to initiate activities in everyday life. All exercise tests were supervised by the same technician, without knowledge of which belonged to which group.

Table 1. Classification system of physical activity

<table>
<thead>
<tr>
<th>Activity</th>
<th>Group I</th>
<th>Group C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walking</td>
<td>48/50%</td>
<td>48/50%</td>
</tr>
<tr>
<td>Cycling</td>
<td>48/50%</td>
<td>48/50%</td>
</tr>
<tr>
<td>Swimming</td>
<td>48/50%</td>
<td>48/50%</td>
</tr>
<tr>
<td>Jogging</td>
<td>48/50%</td>
<td>48/50%</td>
</tr>
<tr>
<td>Running</td>
<td>48/50%</td>
<td>48/50%</td>
</tr>
</tbody>
</table>

Table 2. Characteristics of the patients in the intervention group (Group I) and the control group (Group C) at time of randomization.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Group I</th>
<th>Group C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>71 (39)</td>
<td>71 (42)</td>
</tr>
<tr>
<td>Sex (male/female)</td>
<td>46/54</td>
<td>46/54</td>
</tr>
<tr>
<td>Diabetes Mellitus</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Hypertension</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Previous AMI</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Previous PICA</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Previous CABG</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 3. Pharmacological treatment of the patients in the intervention group (Group I) and the control group (Group C) at randomization and after three months. Patients are presented as number (%) of patients.

<table>
<thead>
<tr>
<th>Type of drug</th>
<th>Randomization</th>
<th>Three months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta-blockers</td>
<td>46/46</td>
<td>46/46</td>
</tr>
<tr>
<td>Digitalis</td>
<td>3/3</td>
<td>3/3</td>
</tr>
<tr>
<td>Long-acting nitrates</td>
<td>26/26</td>
<td>26/26</td>
</tr>
<tr>
<td>Diuretics</td>
<td>19/19</td>
<td>19/19</td>
</tr>
<tr>
<td>Antihypertensives</td>
<td>11/11</td>
<td>11/11</td>
</tr>
<tr>
<td>Calcium antagonists</td>
<td>11/11</td>
<td>11/11</td>
</tr>
<tr>
<td>Aspirin</td>
<td>45/45</td>
<td>45/45</td>
</tr>
<tr>
<td>Lipid-lowering</td>
<td>8/8</td>
<td>8/8</td>
</tr>
</tbody>
</table>

RESULTS

Fifty-six patients were randomized to Group I and 53 patients to Group C. Eight patients withdrew during the study due to Coronary Artery Bypass Graft surgery (CABG) (n = 4; two from each group after 8, 8 and 12 weeks). As a result of the differences between the groups, 51 in Group C. The results are presented as mean (SD) and range (min–max). There were no significant differences between the two groups at baseline.

The pharmacological treatment did not differ significantly between the two groups at baseline.

The average compliance (actual performed training sessions divided by possible sessions) in the intervention group was 87% (range: 64–100%). There were no complications of any kind during the training sessions.

Forty-one patients (82%) reached the goal of an exercise intensity ≥50% of the estimated maximal oxygen uptake during ≥80% of the training sessions, while 25 patients (70%) reached the goal of ≥80% of the estimated maximal oxygen uptake during the three intense periods of the programme.
Exercise capacity
At baseline there was no difference in exercise capacity between the groups. After three months, the maximal exercise capacity had increased from 104 (SD 24; range 60–160) to 122 (SD 27; range 60–170) watts (p < 0.001) in Group I and from 102 (SD 30; range 60–170) to 105 (SD 37; range 50–200) watts (n.s.) in Group C (Fig. 2). The difference between the groups at three months was also statistically significant (p = 0.01). Individual values of maximal exercise capacity at baseline and the corresponding data after three months are illustrated in Fig. 3.

Maximal heart rate, assessed at the two exercise tests, did not differ in the two groups at baseline (Group I 116, SD 17; Group C 118, SD 16) and three months thereafter (Group I 119, SD 17; Group C 121, SD 18).

The intensity during the training sessions was based on the baseline exercise test. To verify the adequacy of the exercise intensity in Group I, a second calculation was performed based on the maximal heart rate at the second exercise test. The maximal heart rate from the baseline exercise test was 97% (80–117%) of that of the second, indicating that the estimated exercise intensity based on the first test was set at an adequate level.

The graded RPE score at submaximal workload, which was similar in Group I and Group C at baseline, became significantly lower in Group I after three months at both 50 (p = 0.02) and 70 watts (p < 0.01). The difference from the findings in Group C, in which there was no significant decrease compared to baseline neither at 50 watts (p = 0.06) nor at 70 watts (p = 0.3), was also significant.

Self-estimated physical activity, capacity and wellbeing
The self-estimated level of physical activity was similar in the two groups at baseline. After three months, there was a significant improvement in Group I (p < 0.001), but not in Group C. There was also a difference between the two groups (p = 0.02; see Fig. 4).

The achieved expectations of physical capacity, self-estimation of total life situation, perceived physical activity and graded wellbeing at three months are presented in Table IV.

DISCUSSION
This is, to our knowledge, the first randomized controlled study of moderate aerobic group training in elderly patients discharged from hospital after acute coronary syndrome. The study showed that the intervention group increased their exercise capacity and improved their wellbeing, compared to a group of patients who, as the only attempt for physical rehabilitation, received the standard recommendation of daily walking according to energy level.

The training programme was intentionally designed to be easy to introduce at any cardiac rehabilitation centre, without any demands for costly equipment. In fact, the high compliance rate and the absence of complications are evidence that this goal was accomplished. As previously reported from other studies, mostly involving younger patients, the incidence of fatal cardiac events is very low during supervised exercise training: 1784/100 000 patient hours (11). In a study by Marchioni et al. (10), there were no age-related differences in interrupted training sessions from pathological causes when comparing younger cardiac patients with elderly patients. The present programme, designed for elderly subjects, appears to be as safe as other programmes. Accordingly, it seems that it is feasible and safe to train patients in this age group.

The patients obviously trained on a rather high level, despite the fact that they perceived their level of exertion as "fairly light" (11 out of 20 on the RPE scale). This was confirmed by most patients reaching the predetermined targets of training intensity at the predetermined proportion of maximum oxygen uptake. Participation in a group and the presence of music may be reasons why they experienced the training as not too tough. The reason that all patients did not reach the predetermined targets may also be an effect of group training, which allows individual adaptation of training intensity. Despite the differences in exercise capacity, all patients joined the same programme, however, with individual adjustment according to physical capacity. The intensity may have been too much for some and too little for others, giving some of the patients more of an endurance training effect than an effect on maximal oxygen uptake.

An interesting finding was that maximal heart rate during the baseline and second exercise tests did not differ significantly (116, SD 17 vs. 119, SD 17) in Group I, despite an increase in exercise capacity. The fact that maximal heart rate did not change after the training period may be due to this group's use of beta-blockers, which do not allow the heart rate to exceed a certain level. This does not, however, alter the response to physical training (5).

The improvement in physical capacity and the trend towards lower perceived exertion at submaximal levels of exercise in the intervention group may influence daily life beneficially. The training was not only intended to increase maximal exercise capacity, but also to affect endurance capacity. The subjects in the intervention group probably achieved an ability to stress themselves somewhat more than the control patients, allowing trained individuals to maintain a higher level of physical activity for longer periods of time.

Table IV: Achieved expectations of physical capacity, self-estimation of total life situation and perceived physical activity, measured by means of a Visual Analogue Scale (VAS) of 100 mm, with the extremes "worse than before" and "fally achieved expectation", with a zero in the middle marking the condition at study-start. Self-estimated wellbeing measured by means of a VAS of 100 mm, with the extremes "not good at all" to "very good" at three-month follow-up. Values presented as median (range).

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>achieved expectations of physical capacity</th>
<th>self-estimation of total life situation</th>
<th>perceived physical activity</th>
<th>self-estimated wellbeing</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>50</td>
<td>3.2 (4.2–8.5)</td>
<td>2.6 (3.6–4.5)</td>
<td>3.9 (3.4–5)</td>
<td>7.8 (5.2–10)</td>
</tr>
<tr>
<td>C</td>
<td>51</td>
<td>3.8 (4.3–5)</td>
<td>3.6 (3.1–4.5)</td>
<td>3.5 (3.9–4.5)</td>
<td>7.8 (5.2–10)</td>
</tr>
</tbody>
</table>

The patients obviously trained on a rather high level, despite the fact that they perceived their level of exertion as "fairly light" (11 out of 20 on the RPE scale). This was confirmed by most patients reaching the predetermined targets of training intensity at the predetermined proportion of maximum oxygen uptake. Participation in a group and the presence of music may be reasons why they experienced the training as not too tough. The reason that all patients did not reach the predetermined targets may also be an effect of group training, which allows individual adaptation of training intensity. Despite the differences in exercise capacity, all patients joined the same programme, however, with individual adjustment according to physical capacity. The intensity may have been too much for some and too little for others, giving some of the patients more of an endurance training effect than an effect on maximal oxygen uptake.
Fig. 2. Maximal exercise capacity at baseline and after three months. The box plot indicates the 10th, 25th, 50th, 75th and 90th percentiles and circles indicate outliers. The difference between the two groups was not statistically significant at baseline. After three months, subjects in the intervention group (Group I) had improved their maximal exercise capacity significantly (p < 0.001), which was not the case in the control group (Group C). □ – Group I, □ – Group C.

The median graded perceived exertion according to Borg's RPE scale, was 11 (range 6–15) during the most intense periods of the training sessions.

Exercise capacity
At baseline there was no difference in exercise capacity between the groups. After three months, the maximal exercise capacity had increased from 104 (SD 24; range 60–180) to 122 (SD 27; range 69–170) watts (p = 0.001) in Group I and from 102 (SD 30; range 60–200) to 105 (SD 37; range 50–200) watts (n.s.) in Group C (Fig. 2).

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The graded RPE score at submaximal workload, which was similar in Group I and Group C at baseline, became significantly lower in Group I after three months at both 50 (p = 0.02) and 70 watts (p = 0.01). This differed from the findings in Group C, in which there was no significant decrease compared to baseline neither at 50 watts (p = 0.06) nor at 70 watts (p = 0.3).

Self-estimated physical activity, capacity and well-being
The self-estimated level of physical activity was similar in the two groups at baseline. After three months, there was a significant improvement in Group I (p = 0.001), but not in Group C. There was also a difference between the two groups (p = 0.02; see Fig. 4).

The achieved expectations of physical capacity, self-estimation of total life situation, perceived physical activity and graded well-being at three months are presented in Table IV.

**DISCUSSION**

This, to our knowledge, is the first randomized controlled study of organized aerobic group training in elderly patients discharged from hospital after acute coronary syndrome. The study showed that the intervention group increased their exercise capacity and improved their well-being, compared to a group of patients who, as the only attempt for physical rehabilitation, received the standard recommendation of daily walking according to energy level.

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An interesting finding was that maximal heart rate during the baseline and second exercise tests did not differ significantly (116, SD 17 vs 119, SD 17) in Group I, despite an increase in exercise capacity. The fact that maximal heart rate did not change after the training period may be due to this group’s use of beta-blockers, which do not allow the heart rate to exceed a certain level. This does not, however, alter the response to physical training.

The improvement in physical capacity and the trend towards lower perceived exertion at submaximal levels of exercise in the intervention group may influence daily life beneficially. The training was not only intended to induce increased maximal exercise capacity, but also to affect endurance capacity. The subjects in the intervention group probably achieved an ability to stress themselves somewhat more than the control patients, allowing trained individuals to maintain a higher level of physical activity for longer periods of time.

**Table IV.** Achieved expectations of physical capacity, self-estimation of total life situation and perceived physical activity, assessed by means of a Visual Analogue Scale (VAS) of 100 mm, with the extremes “worse than before” and “fully achieved expectation”, with a zero in the middle marking the condition at study-start. Self-graded well-being assessed by means of a VAS of 100 mm, with the extremes “not good at all” to “very good” at three-month follow-up. Values presented as median (range).

<table>
<thead>
<tr>
<th>Group</th>
<th>n =</th>
<th>VAS score</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I</td>
<td>50</td>
<td>3.1 (2.9–4.5)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Group C</td>
<td>51</td>
<td>3.9 (3.5–4.4)</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Perceived physical activity</td>
<td>3.5 (2.4–4.5)</td>
<td>&lt;0.05</td>
<td></td>
</tr>
<tr>
<td>Group I</td>
<td>50</td>
<td>7.5 (5.1–10)</td>
<td>&lt;0.03</td>
</tr>
<tr>
<td>Group C</td>
<td>51</td>
<td>7.8 (5.1–10)</td>
<td>&lt;0.03</td>
</tr>
</tbody>
</table>

**Fig. 3.** Individual maximal exercise capacity at baseline compared with maximal exercise capacity after three months. ○ = Group I, □ = Group C. — = line of identity.
The intervention group had higher self-estimated levels of physical activity after three months, indicating that these subjects had more physically active lifestyles. This may be an effect of being part of a training group and having a sense of responsibility towards the group, but also towards the physiotherapist responsible for the training, who was also a member of the study team.

The intervention group reported a greater sense of well-being and more satisfactory total life situations. This may indicate that the results from the training programme had an overall positive effect on their quality of life.

One limitation of this study may be that only fairly "healthy" elderly patients were included. Some patient selection is a prerequisite for the accomplishment of a training programme in elderly patients. Thus, the results of this study should not be generalized to all patients over the age of 65, but to those who are able to perform an exercise test at a reasonably low intensity corresponding to a brisk walk on flat ground. Besides this prerequisite, the patients in the present study were consecutively recruited from a standard population as seen in coronary care units.

The rehabilitation focused on physical training. It is, of course, not possible to completely separate this from a more multifactorial intervention. All patients, regardless of group allocation, had access to a professional team specializing in cardiac rehabilitation during the study, including a medical follow-up at the outpatient clinic. In addition, the intervention group had opportunity to ask questions and discuss problems before and after each training session, and to share their problems with other patients. The control group was encouraged to contact the study team at any time during the study period. Patients in both groups may have benefited from this increased attention. This may have influenced such factors as well-being and self-estimated total life situation.

In conclusion, organized aerobic group training can easily be offered to elderly patients after an acute coronary episode. This will result in improved exercise tolerance and higher self-rated well-being. There is no need for costly equipment for patient monitoring. Thus, this training programme may be applied in any cardiac rehabilitation centre. This knowledge should influence attitudes towards cardiac rehabilitation in elderly patients.

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The intervention group had higher self-estimated levels of physical activity after three months, indicating that these subjects had more physically active lifestyles. This may be an effect of being part of a training group and having a sense of responsibility towards the group, but also towards the physiotherapist responsible for the training, who was also a member of the study team.

The intervention group reported a greater sense of well-being and more satisfactory total life situations. This may indicate that the results from the training programme had an overall positive effect on their quality of life.

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