

Why patients after acute coronary syndromes do not participate in an early outpatient rehabilitation programme?

Ewa Deskur-Śmielecka, Sławomira Borowicz-Bieńkowska, Aleksandra Brychcy, Małgorzata Wilk, Izabela Przywarska, Piotr Dylewicz

University of Physical Education, Poznan, Poland

Abstract

Background: The value of cardiac rehabilitation in patients with coronary artery disease has been well established. The main problem is a low attendance of patients qualified for rehabilitation.

Aim: To assess differences between subjects attending outpatient cardiac rehabilitation (OutCR) after completing an early inpatient programme (InCR), and patients refusing participation in OutCR; to investigate factors determining patients' decisions.

Methods: Seventy-two patients (mean age 57 ± 9.4 years; 53 men) 2-3 weeks after an acute coronary syndrome (ACS) treated with primary PCI were enrolled. On admission to the cardiac rehabilitation ward, the following parameters were assessed: quality of life (EuroQol-5D questionnaire), psychological status (Beck's, SOPER and STAI questionnaires), marital status, education, economic status, employment, place of living, smoking status, and comorbidities (a questionnaire prepared by the authors). Additionally, patients' opinions on outpatient and inpatient cardiac rehabilitation were noted. The inpatient programme lasted 2-3 weeks. At discharge, the assessment was repeated, and patients were proposed to enrol in a 12-week outpatient programme. In the case of refusal, patients were asked to give the reason.

Results: Two men failed to complete the inpatient program. Of the remaining 70 subjects, 16 attended and completed the outpatient programme. In the group participating in OutCR, there were fewer patients with depression before InCR (12 vs. 39% in the group without OutCR, $p = 0.0484$). Subjects in the OutCR group had a higher score for mood after InCR (7.7 ± 1.25 vs. 6.7 ± 1.69 , $p = 0.0365$), lower score for emotional stress before and after InCR (before InCR: 4.4 ± 1.09 vs. 5.3 ± 1.34 , $p = 0.0188$; after InCR: 3.8 ± 1.51 vs. 4.8 ± 1.4 , $p = 0.0262$), and lower score for anxiety before InCR (3.1 ± 1.75 vs. 4.4 ± 2.12 , $p = 0.0426$). Patients in the two groups differed with regard to employment ($p = 0.0256$) and smoking status ($p = 0.0517$). In both groups, most patients ($\geq 80\%$) preferred inpatient rehabilitation. Continuous medical care, lack of commuting problems, and convenience were the most frequently given advantages of inpatient rehabilitation, while commuting problems and conflict with job were the most frequently perceived barriers to outpatient rehabilitation.

Conclusions: Only a small proportion of patients after an ACS decides to participate in outpatient rehabilitation after completing a short-term inpatient programme. Psychological status, employment and smoking status are among the factors that differentiate OutCR attenders and non-attenders. Continuous medical care, lack of commuting problems, and convenience were the most frequently given advantages of inpatient rehabilitation, while commuting problems and conflict with job were the most frequently perceived barriers to outpatient rehabilitation.

Key words: cardiac rehabilitation, quality of life, depression, anxiety, socioeconomic status

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Introduction

Comprehensive cardiac rehabilitation should be an integral part of medical management in each patient with cardiovascular disease [1]. It can be performed in hospitals, outpatient clinics and at patients' homes. All mentioned types of cardiac rehabilitation have well documented

efficacy [2, 3] and the availability of each type of rehabilitation in different countries depends on local tradition, sources of funding and organisation possibilities. However, many investigators believe that short-term inpatient cardiac rehabilitation programmes do not provide long-term benefits and should be provided only for

Address for correspondence:

Ewa Deskur-Śmielecka MD, PhD, Akademia Wychowania Fizycznego, ul. Królowej Jadwigi 27/39, 61-871 Poznań, tel.: +48 61 835 50 00, fax: +48 61 835 50 98, e-mail: edeskur@poczta.onet.pl

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patients with high risk of cardiovascular complications, advanced age or comorbidities, or it should be continued on an outpatient basis or at home [4]. An important problem of cardiac rehabilitation programmes is the low percentage of patients who attend rehabilitation programmes, which varies according to different studies from 17 to 41%. Another problem, which is of particular importance in long-term outpatient programmes, is the high percentage of patients who cease to attend, which is estimated at 40-50% during 6-12 months [8-10]. Data from the last report of the POLKARD programme, which was prepared for the Ministry of Health, indicate that the attendance of patients in Poland is half of the European mean (17% as compared to 34%) [11, 12]. An especially low percentage of participants is observed in outpatient rehabilitation programmes and the number is decreasing (1569 in year 2007 as compared with 4666 in year 2002) [13, 11]. The number of patients who attended outpatient rehabilitation programmes was considerably smaller than the number of procedures ordered by the National Health Fund (1569 patients as compared with about 3700 procedures) [13]. In our centre we have made an attempt to introduce a new model of cardiac rehabilitation in patients with acute coronary syndromes based on addition of a 3-month outpatient programme to short-term inpatient cardiac rehabilitation.

The aim of the study was to analyse differences between patients who continued the rehabilitation programme on an outpatient basis after initial inpatient rehabilitation. We also assessed which factors in patients' opinion influenced their decisions.

Methods

The current analysis is a part of a study assessing physiological, psychological and biochemical effects of extending short-term inpatient cardiac rehabilitation by a 12-week outpatient programme. Seventy two patients admitted to the hospital for inpatient cardiac rehabilitation (InCR) were included in the study. The patients were admitted 2-3 weeks after an acute coronary syndrome (ACS) treated with percutaneous coronary intervention. The inclusion criteria were as follows: exercise tolerance during a symptom-limited exercise test (≥ 3 MET), no significant changes of ST segment up to 5 MET, no serious arrhythmias and ejection fraction $> 35\%$ as assessed by echocardiography. The exclusion criteria included: chronic or acute inflammatory state, decompensated hepatic or renal insufficiency, neoplastic disease and pregnancy. On admission, in addition to routine medical examination, in each patient the following assessments were performed: quality of life using the EuroQoL-5D questionnaire [14], level of depression according to the Beck's depression inventory [15], and psychological status using SOPER [16] and STAI [17] questionnaires. Moreover, data on socioeconomic status, education status, place of residence,

smoking and the prevalence of chronic diseases (hypertension and diabetes mellitus), using a questionnaire prepared by the authors, were evaluated. Also, the patients' opinion on outpatient rehabilitation programmes was assessed by asking the question: 'If you could choose, what type of cardiac rehabilitation programme after myocardial infarction would you prefer: 1) inpatient; 2) outpatient; 3) other – what type?; 4) I would not agree to participate in a rehabilitation programme after myocardial infarction; 5) it is hard to say. Please justify your choice (open question)'.

The inpatient cardiac rehabilitation programme was implemented for 2-3 weeks and included moderate-intensity endurance training (10 training units), education about coronary artery disease and pharmacotherapy according to the current guidelines of the European Society of Cardiology; psychotherapy in some cases was also performed.

After the inpatient cardiac rehabilitation programme was completed, the whole evaluation was repeated and the patients were proposed participation in a 12-week outpatient cardiac rehabilitation (OutCR) programme, which included physical exercises twice or 3 times a week performed in the same rehabilitation centre. Patients who did not agree to attend outpatient rehabilitation were asked to justify their decision. The study was accepted by the ethics committee of the Medical University in Poznan.

Results

Among 72 patients (mean age 57 ± 9.4 years; 53 men) included in the study, in 2 male patients the inpatient rehabilitation programme was stopped due to acute renal failure (1 patient) and stroke (1 patient). Out of the remaining 70 patients, 16 individuals attended the outpatient rehabilitation programme and all completed the whole programme. The comparison of characteristics of patients who participated in the outpatient rehabilitation programme and those who refused to take part in the programme is shown in Table I. There were no differences between groups in age, sex, and physical capacity both before and after InCR, as well as in ejection fraction, BMI and the prevalence of comorbidities (diabetes and hypertension) (Table I). No differences were observed when marital status, education status, economic status and place of residence were analysed (in- or outside the same city where the rehabilitation centre is situated). The main differences between the studied groups were the results of psychological status evaluation. In the group of patients who continued rehabilitation in the outpatient programme a lower percentage of patients with depression (> 9 points on Beck's depression inventory) was observed at the beginning of the inpatient programme. Those patients were also characterised by better basic mood according to the SOPER scale and lower level of psychological stress as assessed by SOPER and STAI scales. On the other hand, there was no difference in

Table I. Comparison of baseline clinical and socioeconomic characteristics of patients who decided to extend inpatient rehabilitation by attending the outpatient programme and patients who refused to participate in the outpatient programme

	Participants of the outpatient programme (n = 16)	Patients who did not participate in the outpatient programme (n = 54)	p
Age (mean ± SD) [years]	58 ± 8.2	56 ± 9.1	NS
Male sex, n (%)	13 (81)	38 (70)	NS
Ejection fraction as assessed with echocardiography (mean ± SD) [%]	56 ± 5.8	55 ± 7.5	NS
BMI	28.7 ± 3.68	28.8 ± 4.08	NS
Physical efficiency before InCR (mean ± SD) [MET]	6.6 ± 2.33	7.0 ± 2.62	NS
Physical efficiency after InCR (mean ± SD) [MET]	8.9 ± 2.47	7.9 ± 2.95	NS
Quality of life before InCR – VAS (mean ± SD)	72 ± 16.3	68 ± 17.0	NS
Quality of life after InCR – VAS (mean ± SD)	78 ± 19.4	76 ± 16.4	NS
Result in Beck's depression inventory before InCR (mean ± SD)	5.4 ± 4.24	9.3 ± 6.15	0.0152
Result in Beck's depression inventory after InCR (mean ± SD)	3.1 ± 2.47	5.9 ± 5.34	0.0353
Depression (Beck > 9) before InCR, n (%)	2 (12)	21 (39)	0.0484
Depression (Beck > 9) after InCR, n (%)	1 (6)	10 (19)	NS
Baseline mood (SOPER) before InCR (mean ± SD)	7.1 ± 1.48	6.1 ± 1.29	0.0629
Baseline mood (SOPER) after InCR (mean ± SD)	7.7 ± 1.25	6.7 ± 1.69	0.0365
Anxiety (SOPER) before InCR (mean ± SD)	4.1 ± 1.44	5.0 ± 1.30	0.0619
Anxiety (SOPER) after InCR (mean ± SD)	3.7 ± 1.45	4.7 ± 1.55	0.0792
Psychological stress (SOPER) before InCR (mean ± SD)	4.4 ± 1.09	5.3 ± 1.34	0.0188
Psychological stress (SOPER) after InCR (mean ± SD)	3.8 ± 1.51	4.8 ± 1.43	0.0262
State anxiety (STAI) before InCR (mean ± SD)	3.1 ± 1.75	4.4 ± 2.12	0.0426
State anxiety (STAI) after InCR (mean ± SD)	2.7 ± 1.72	3.8 ± 2.09	0.0536
Trait anxiety (STAI) before InCR (mean ± SD)	5.5 ± 2.16	5.8 ± 1.80	NS
Trait anxiety (STAI) after InCR (mean ± SD)	4.8 ± 2.29	6.0 ± 1.59	0.0841
Marital status (married), n (%)	14 (88)	41 (76)	NS
Education, n (%)			NS
primary	1 (6)	8 (15)	
vocational	6 (38)	16 (30)	
secondary	6 (38)	23 (43)	
higher	3 (19)	7 (13)	
Material status, n (%)			NS
good	9 (56)	20 (37)	
moderate	7 (44)	28 (52)	
bad	0 (0)	6 (11)	
Form of employment, n (%)			0.0256
employee	6 (28)	23 (43)	
own business	3 (19)	1 (2)	0.0518 ^a
pension + part time job	4 (25)	7 (13)	
only pension	2 (12)	22 (41)	0.0366 ^a
household	1 (6)	1 (2)	
Smoking, n (%)			0.0517
currently	0 (0)	5 (9)	
stopped after ACS	4 (25)	27 (50)	
stopped before ACS	8 (50)	10 (18)	0.0889 ^b
never	4 (25)	12 (22)	0.0307 ^b
Hypertension	8 (50)	33 (61)	NS
Diabetes mellitus	2 (12)	11 (20)	NS
Place of residence outside the city where the rehabilitation centre is situated	3 (19)	23 (43)	NS

Abbreviations: ACS – acute coronary syndrome, InCR – inpatient cardiac rehabilitation, VAS – visual analogue scale

^a as compared to all other forms of employment together

^b as compared to all other categories of smoking together

the quality of life determined by the health status evaluated by the visual analogue scale in the Euro-QoL questionnaire. Differences regarding smoking and employment status between groups were also observed. The reasons for patients' refusal to participate in the outpatient programme are presented in Table II (patients were asked to indicate one, the most important reason). In both groups the majority of patients preferred inpatient rehabilitation. In the group which refused to participate in OutCR 83% of patients had chosen this option before InCR, and 92% after InCR; in the group which participated in OutCR the results were 90% and 80%, respectively. Among patients who did not attend OutCR 11% of patients before InCR preferred outpatient rehabilitation as compared to 8% after InCR; in the group of participants in the outpatient programme 10% of patients before and 10% of patients after InCR preferred OutCR. Among patients who did not participate in OutCR 6% of patients did not have any preferences regarding type of rehabilitation (evaluation before InCR); in the group of OutCR participants it was 10% (evaluation after InCR).

As the main barriers to attendance of outpatient rehabilitation the majority of patients mentioned problems with transport to the rehabilitation centre and incompatibility between work and the rehabilitation programme. Only 9% of patients cited health problems as a reason for refusal, and 11% expressed intention to participate in the outpatient programme but did not attend any training session.

When the patients were asked why they prefer InCR than OutCR, they gave the following reasons: continuous health care, and the safety which it gives, no necessity for transport to the rehabilitation centre, isolation from home environment and everyday problems, the company of other patients, the opportunity for inner calm and concentration on own health, and more rigorous physical activity and diet programme (Figure 1).

Discussion

According to published data, about 50% of patients early after ACS agree to attend different types of programmes aimed at increasing physical activity [18-20]. We noted a surprisingly low percentage (23%) of patients who started our outpatient programme. It was even more surprising because all patients had a generally positive opinion on the rehabilitation programme (in response to the question regarding the preferred type of rehabilitation none of the patients answered: 'I would not agree to take part in a rehabilitation programme after myocardial infarction'). It could be good exercise tolerance which influenced the answer (8.9 ± 2.4 MET in outpatients and 8.0 ± 3.00 in the group without outpatient programme participation). It could give the patients a feeling of pointlessness of further participation in the reha-

Table II. Reasons for patients' refusal to participate in outpatient rehabilitation programme

	Patients who did not participate in outpatient programme (n = 54), n (%)
Problem with transport to the rehabilitation centre	21 (39)
Incompatibility between work and rehabilitation	7 (13)
Health problems	5 (9)
Necessity of care of a family member	3 (6)
Expressed intention to participate, but did not attend any session	6 (11)
No reason was given	12 (22)

bilitation programme although during educational sessions the need of regular physical activity was underlined.

The offer of extending the rehabilitation by way of the outpatient programme was rejected by patients with a higher level of anxiety and lowered mood (Table I). It can be presumed that this group of patients should be particularly encouraged to attend long-term rehabilitation programmes because of the opportunity to implement psychotherapy. There are a few conflicting data concerning the influence of psychological status on attendance in

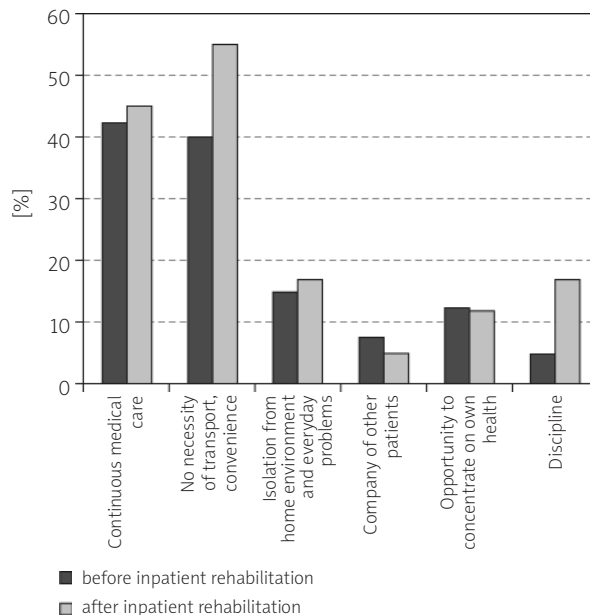


Figure 1. The advantages of inpatient rehabilitation most frequently expressed by patients. The analysis included patients from both groups who indicated inpatient programme as the preferred type of cardiac rehabilitation. Bars represent the percentage of patients who gave the indicated answer. Patients could choose more than one answer

rehabilitation programmes. In a systemic review by Cooper et al. [21] it was demonstrated that depression and higher level of anxiety were factors associated with lower probability of participation in rehabilitation programmes (all programmes included in the review were outpatient programmes). On the other hand, in the study by Whitmarsh et al. [22] patients who attended a rehabilitation programme were characterised by higher levels of anxiety and depression than those who did not attend. It was also demonstrated that depression increases the risk that the patient will interrupt the programme [23].

Another factor which is considered in analyses of attendance in cardiac rehabilitation programmes is smoking, which is deemed to be a factor associated with rehabilitation interruption. It was demonstrated in several studies that there is a higher drop-out rate in rehabilitation programmes among smokers than non-smokers [9, 10]. In our study the number of smokers was very low, which was due to the high percentage of patients who stopped smoking after ACS, and there were no differences between groups according to smoking status (Table I). There was also no difference between the two groups when assessing the number of patients who never smoked. In the group of patients who attended the outpatient programme there were significantly more patients who stopped smoking before ACS (all patients who stopped smoking did it at least 6 months before the ACS; data not shown). It can be assumed that these patients already before the ACS were highly motivated to partake in health-oriented activities.

One of the most important factors influencing attendance in outpatient rehabilitation programmes is the issue of reaching the rehabilitation centre [21, 23-26]. It is believed that such programmes are not suitable for patients with the duration of travel to the rehabilitation centre exceeding 60 min [27]. Our centre is located at the periphery of a big city and the estimated duration of travel with public transport from the city centre takes about one hour. Problems with transport were the reason most often mentioned by patients for refusal to participate in the outpatient programme (Table II). However, it seems surprising that there were no differences between groups in the place of residence (Table I). Thus, it seems that for well motivated patients even a long distance from the rehabilitation centre is not a serious barrier to attendance in the outpatient rehabilitation programme.

In the studies mentioned above it was demonstrated that participation in rehabilitation programmes is influenced by educational status and socioeconomic status [9, 21, 23]. In the current study we did not observe such associations but there was a difference in the form of employment: patients who had their own business were more likely to participate in the outpatient programme (the difference reached borderline statistical significance). On the other hand, among patients who refused to take part in the outpatient rehabilitation programme there were

more pensioners who did not perform any other work (not necessarily paid).

An important limitation of our study is the small number of patients, especially in the group with the prolonged rehabilitation programme. Therefore, the results of the study should be interpreted with caution. Nevertheless, it seems that for participation in an outpatient rehabilitation programme high patient motivation is needed. Unfortunately, we did not directly assess the level of patients' motivation. However, data based on studies in the American population confirm its high importance [18, 28]. It is known that in our society the level of responsibility for personal health is not high. Rehabilitation during acute phase hospitalisation probably does not provide good conditions for successful education about life-style modification because of the short duration of hospital stay as well as strong physical and emotional stress of patients. The increased level of stress and depression observed in a substantial proportion of patients in the current study (Table I) also may lead to decreased ability of patients to attend rehabilitation programmes requiring more personal involvement. In this situation, participation in inpatient rehabilitation, preferred by the majority of patients due to, among other reasons, its convenience, gives a better opportunity of at least life-style modification.

Conclusions

1. A low number of patients after ACS decide to continue rehabilitation started as an inpatient programme on an outpatient basis.
2. Psychological status, form of employment, and smoking status influence this decision.
3. The main advantages of inpatient rehabilitation programmes according to patients' opinion are twenty-four-hour medical support and the convenience of such programmes. The main barrier to participating in an outpatient programme is the necessity of transport to the rehabilitation centre.

References

1. World Health Organization Expert Committee on Rehabilitation after Cardiovascular Diseases, with Special Emphasis on Developing Countries. Rehabilitation after cardiovascular diseases, with special emphasis on developing countries: report of a WHO expert committee. *WHO Technical Report Series* 1993; 831: 1-122.
2. Wenger NK. Current status of cardiac rehabilitation. *J Am Coll Cardiol* 2008; 51: 1619-31.
3. Taylor RS, Brown A, Ebrahim S, et al. Exercise-based rehabilitation for patients with coronary heart disease: systematic review and meta-analysis of randomized controlled trials. *Am J Med* 2004; 116: 682-92.
4. Gielen S, Brutsaert D, Sanner H, et al. Rehabilitacja kardiologiczna. In: Camm AJ, Luscher TF, Serruys PW (eds.). *Choroby serca i naczyń. Podręcznik Europejskiego Towarzystwa Kardiologicznego*. Termedia, Poznań 2006/2007; 827-51.

5. Ades PA, Waldmann ML, McCann WJ, et al. Predictors of cardiac rehabilitation participation in older coronary patients. *Arch Intern Med* 1992; 152: 1033-5.
6. Ades PA, Waldmann ML, Polk DM, et al. Referral patterns and exercise response in the rehabilitation of female coronary patients aged greater than or equal to 62 years. *Am J Cardiol* 1992; 69: 1422-5.
7. Lane D, Carroll D, Ring C, et al. Predictors of attendance at cardiac rehabilitation after myocardial infarction. *J Psychosom Res* 2001; 51: 497-501.
8. Oldridge NB. Compliance with cardiac rehabilitation services. *J Cardiopulm Rehabil* 1991; 11: 115-27.
9. Sarrafzadegan N, Rabiei K, Shirani S, et al. Drop-out predictors in cardiac rehabilitation programmes and the impact of sex differences among coronary heart disease patients in an Iranian sample: a cohort study. *Clin Rehabil* 2007; 21: 362-72.
10. Sanderson BK, Phillips MM, Gerald L, et al. Factors associated with the failure of patients to complete cardiac rehabilitation for medical and nonmedical reasons. *J Cardiopulm Rehabil* 2003; 23: 281-9.
11. Grupa Robocza w dziedzinie Rehabilitacji Kardiologicznej Narodowego Programu Profilaktyki i Leczenia Chorób Układu Sercowo-Naczyniowego Polkard 2003–2005. Raport o stanie rehabilitacji kardiologicznej w Polsce na podstawie bazy danych utworzonej w ramach realizacji programu rozwoju rehabilitacji kardiologicznej w Polsce. www.polkard.org
12. Vanhees L, McGee HM, Dugmore LD, et al. A representative study of cardiac rehabilitation activities in European Union Member States: the Carinex survey. *J Cardiopulm Rehabil* 2002; 22: 264-72.
13. Grupa Robocza ds. Rehabilitacji Kardiologicznej Narodowego Programu Profilaktyki i Leczenia Chorób Układu Sercowo-Naczyniowego Polkard 2006–2008. Krajowa mapa zapotrzebowania na rehabilitację kardiologiczną na poziomie województwa i powiatu. Ocena stanu rehabilitacji kardiologicznej w Polsce w 2008 roku. Dane niepublikowane opracowane na zlecenie Ministerstwa Zdrowia w ramach programu Polkard.
14. Brooks R. EuroQol: the current state of play. *Health Policy* 1996; 37: 53-72.
15. Beck AT, Weissman A, Lester D, et al. The measurement of pessimism: the hopelessness scale. *J Consult Clin Psychol* 1974; 42: 861-5.
16. Tylka J, Makowska M. Skala Oceny Psychologicznej Efektywności Rehabilitacji (SOPER). *Przegląd Psychologiczny* 1985; 28: 815-28.
17. Spielberger CD, Gorsuch RL, Lushene RE. STAI Manual for the State – Trait Anxiety Inventory. *Consulting Psychologists Press Palo Alto, CA* 1970.
18. Moore SM, Charvat JM, Gordon NH, et al. Effects of a CHANGE intervention to increase maintenance following cardiac events. *Ann Behav Med* 2006; 31: 53-62.
19. Brennan PF, Moore SM, Bjornsdottir G, et al. Heart care: an Internet-based information and support system for patient home recovery after coronary artery bypass graft (CABG) surgery. *J Adv Nurs* 2001; 35: 699-708.
20. Moore SM, Ruland CM, Pashkow FJ, et al. Women's patterns of exercise following cardiac rehabilitation. *Nurs Res* 1998; 47: 318-24.
21. Cooper AF, Jackson G, Weinman J, et al. Factors associated with cardiac rehabilitation attendance: a systematic review of the literature. *Clin Rehabil* 2002; 16: 541-52.
22. Whitmarsh A, Koutantji M, Sidell K. Illness perceptions, mood and coping in predicting attendance at cardiac rehabilitation. *Br J Health Psychol* 2003; 8: 209-21.
23. Yohannes AM, Yalfani A, Doherty P, et al. Predictors of drop-out from an outpatient cardiac rehabilitation programme. *Clin Rehabil* 2007; 21: 222-9.
24. Lieberman L, Meana M, Stewart D. Cardiac rehabilitation: gender differences in factors influencing participation. *J Womens Health* 1998; 7: 717-23.
25. Allen JK, Scott LB, Stewart KJ. Disparities in women's referral to and enrollment in outpatient cardiac rehabilitation. *J Gen Intern Med* 2004; 19: 747-53.
26. Cooper AF, Jackson G, Weinman J, et al. A qualitative study investigating patients' beliefs about cardiac rehabilitation. *Clin Rehabil* 2005; 19: 87-96.
27. Schonstedt S, Beckmann S, Disselhoff W, et al. Experiences with ambulatory cardiologic phase II rehabilitation. *Herz* 1999; 24 (Suppl. 1): 3-8.
28. Evenson KR, Fleury J. Barriers to outpatient cardiac rehabilitation participation and adherence. *J Cardiopulm Rehabil* 2000; 20: 241-6.

Dlaczego chorzy po ostrych zespołach wieńcowych nie chcą kontynuować wczesnej stacjonarnej rehabilitacji w programach ambulatoryjnych?

Ewa Deskur-Śmielecka, Sławomira Borowicz-Bieńkowska, Aleksandra Brychcy, Małgorzata Wilk, Izabela Przywarska, Piotr Dylewicz

Akademia Wychowania Fizycznego, Poznań

Streszczenie

Wstęp: Problemem rehabilitacji kardiologicznej jest mała liczba chorych zgłaszających się do programów rehabilitacyjnych i duża częstość rezygnacji w trakcie ich trwania. W warunkach polskich szczególnie mało osób uczestniczy w rehabilitacji ambulatoryjnej i obserwuje się tendencję do zmniejszania tej liczby.

Cel: Analiza, czym różnią się osoby, które po przebyciu stacjonarnej rehabilitacji kardiologicznej (SRK) podjęły jej kontynuację w warunkach ambulatoryjnych (ARK), od chorych, którzy nie zgłosili się do programu ambulatoryjnego, a także określenie, jakie czynniki w opinii chorych wpłynęły na ich decyzję.

Metody: Do badania zakwalifikowano 72 osoby (średni wiek $57 \pm 9,4$ roku; 53 mężczyzn) przyjęte na oddział SRK w ciągu 2–3 tygodni po leczonym interwencyjnie ostrym zespole wieńcowym (OZW). Przy przyjęciu u wszystkich osób, poza standardowym badaniem lekarskim, oceniono jakość życia (kwestionariusz EuroQol-5D) i stan psychiczny (kwestionariusze Becka, SOPER i STAI), ponadto zebrano dane dotyczące statusu socjoekonomicznego, wykształcenia, miejsca zamieszkania, palenia papierosów, chorób przewlekłych, a także poglądów na SRK i ARK. Po zakończeniu trwającego 2–3 tygodnie programu SRK powtórzono wymienione badania i zaproponowano chorym kontynuację rehabilitacji w 12-tygodniowym programie ambulatoryjnym.

Wyniki: Dwaj mężczyźni nie ukończyli programu SRK. Z pozostałych 70 osób, 16 chorych zgłosiło się i ukończyło program ARK. Chorzy, którzy zgłosili się do ARK i którzy odmówili uczestnictwa w ARK, nie różnili się pod względem wieku, płci, poziomu wydolności fizycznej przed SRK i po jej zakończeniu, a także wielkości frakcji wyrzutowej, wskaźnika masy ciała oraz występowania cukrzycy i nadciśnienia tętniczego. Nie stwierdzono różnic pomiędzy grupami pod względem stanu cywilnego, poziomu wykształcenia, sytuacji ekonomicznej, jakości życia oraz miejsca zamieszkania. W grupie, która zgłosiła się do ARK, stwierdzono mniejszy odsetek chorych z depresją przed SRK (12% w porównaniu z 39% w grupie bez ARK, $p = 0,0484$), lepszy podstawowy nastrój w skali SOPER po SRK ($7,7 \pm 1,25$ w porównaniu z $6,7 \pm 1,69$ w grupie bez ARK, $p = 0,0365$), niższy poziom napięcia psychicznego w skali SOPER przed SRK i po niej (przed SRK: $4,4 \pm 1,09$ w porównaniu z $5,3 \pm 1,34$ w grupie bez ARK, $p = 0,0188$; po SRK: $3,8 \pm 1,51$ w porównaniu z $4,8 \pm 1,43$ w grupie bez ARK, $p = 0,0262$) oraz lęku ocenianego jako stan w skali STAI przed SRK ($3,1 \pm 1,75$ w porównaniu z $4,4 \pm 2,12$ w grupie bez ARK, $p = 0,0426$). Czynniki różnicującymi obie grupy było również palenie papierosów ($p = 0,0517$) oraz forma zatrudnienia ($p = 0,0256$). W obu grupach zdecydowana większość osób (80%) preferowała SRK, najczęściej uzasadniając swój wybór stałością opieki lekarskiej, brakiem konieczności dojazdów i wygodą. Wśród barier uniemożliwiających uczestnictwo w ARK najwięcej osób wymieniło trudności związane z dojazdami i konflikt z pracą zawodową.

Wnioski: 1. Niewielki odsetek chorych po OZW decyduje się na kontynuację SRK w formie programu ARK. 2. Do czynników różnicujących chorych uczestniczących w programie ARK i odmawiających uczestnictwa w nim należą stan psychiczny, forma zatrudnienia i palenie papierosów. 3. Najważniejszymi zaletami SRK w opinii chorych są całodobowa opieka medyczna i wygoda, natomiast główną przeszkodą w uczestniczeniu w ARK jest konieczność dojazdów.

Słowa kluczowe: rehabilitacja kardiologiczna, jakość życia, depresja, lęk, status socjoekonomiczny

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Adres do korespondencji:

dr n. med. Ewa Deskur-Śmielecka, Akademia Wychowania Fizycznego, ul. Królowej Jadwigi 27/39, 61-871 Poznań, tel.: +48 61 835 50 00, faks: +48 61 835 50 98, e-mail: edeskur@poczta.onet.pl

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