

Quality of life in high-risk patients with stable multivessel coronary artery disease treated either medically or with coronary artery bypass graft surgery – 12-month follow-up

Radosław Kręcki¹, Jarosław Drożdż¹, Piotr Szcześniak², Jarosław D. Kasprzak¹, Jan Z. Peruga¹, Piotr Lipiec¹, Karina Wierzbowska-Drabik¹, Jakub Foryś¹, Daria Orszulak-Michalak², Maria Krzemińska-Pakuła¹

¹ 2nd Department of Cardiology, Medical University, Lodz, Poland

² Department of Biopharmation, Medical University, Lodz, Poland

Abstract

Background: Treatment of chronic diseases, such as atherosclerosis, usually leads to significant short-term improvement. Mid- and long-term results are not always as satisfactory. That is why improvement of quality of life should be the leading qualification criterion for invasive procedures, which sometimes carry a risk of complications.

Aim: To determine the quality of life in patients with stable, multivessel coronary artery disease (MCAD), treated surgically or medically.

Methods: The study group comprised 107 patients (pts; 80 males) suffering from MCAD, assigned to coronary artery bypass grafting (CABG) (55 pts) or to medical treatment alone (52 pts). The mean Gensini score in the whole group was 90 (66-132). To evaluate quality of life we used a Short Form-36 (SF-36) health status survey by the International Quality of Life Assessment Project.

Results: During a 12-month follow-up 9 pts died (6 pts in the medically treated group and 3 in the CABG group), all for cardiovascular reasons. Patients treated conservatively were more often hospitalised due to angina symptoms (20 vs. 5, $p = 0.003$). Analysis of SF-36 showed that pts treated surgically had better improvement of quality of life in comparison with medically treated patients. Significant differences were found for physical functioning, bodily pain, vitality, mental health and mental component summary.

Conclusions: This study has shown that there is a significant difference in health-related quality of life 12 months after CABG surgery and medical treatment alone in high-risk patients with MCAD. Surgical treatment decreases the number of adverse events, better attenuates of anginal and heart failure symptoms, and improves the quality of life, especially the mental component. Our results should encourage selecting patients with advanced atherosclerosis for revascularisation procedures, even if there is a very high peri-procedural risk.

Key words: multivessel coronary artery disease, quality of life, treatment

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Introduction

Cardiovascular diseases, including coronary artery disease (CAD), are the most important cause of mortality in economically developed countries [1-3]. A significant progress of interventional cardiology over the last several years has contributed to better understanding of the complexity of CAD. On the basis of angiographic images it

became possible to estimate the degree of severity of pathology impeding the blood flow in epicardial arteries. This gave a reason to create a new nosological unit – multivessel coronary artery disease (MCAD), defined as subcritical or critical stenosis (cross-sectional area decreased by $\geq 75\%$) of at least two out of three main coronary arteries. It has been estimated that MCAD constitutes as much as 50% of all cases of CAD [1, 4, 5].

Address for correspondence:

Radosław Kręcki MD, PhD, II Katedra i Klinika Kardiologii, Uniwersytet Medyczny, ul. Kniaziewiczza 1/5, 91-347 Łódź, tel.: +48 42 251 60 11, e-mail: rkrecki@gazeta.pl

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The World Health Organisation defines health as a lack of disease or disability and a state of full physical, psychological and social capacity [6]. According to the above definition the idea of human health cannot be limited only to a lack of disease on clinical examination, and the aim of patients' treatment cannot be limited to the reduction of mortality indices. It is thus very important to take a holistic approach toward patients, including their widely understood well-being. This approach is much more difficult to analyse quantitatively. However, it is becoming more common in clinical practice to use specially designed questionnaires that include various aspects of health-related quality of life (QoL) such as psychological, physical and social aspects [7].

Although treatment methods used nowadays for chronic diseases such as atherosclerosis lead to transient improvement, their mid- and long-term results are not fully satisfactory. Therefore, longer follow-up using QoL measurement tools is becoming more valuable. It should be realised that treatment affects not only the physical structure and activity of the organism, but also the whole of the patient's life in all its aspects. Quantitative analysis of the QoL using tools designed specially for this purpose allows evaluation of the degree and the result of this intervention, even if not in a direct manner.

The aim of our study was to assess and compare the QoL in patients with CAD treated either medically or with coronary artery bypass grafting (CABG).

Methods

Study group

One hundred and seven patients with an angiographically confirmed diagnosis of stable CAD, who were

admitted to our department between August 2006 and September 2007, were included in the study. Among 107 patients included in the study group 5 patients withdrew their consent to participate in the study. Therefore, there were 102 patients included in the final analysis.

The inclusion criteria were:

1. age \geq 18 years,
2. written consent to participate in the study,
3. angiographically confirmed CAD with stenosis of \geq 75% in at least two main coronary arteries including stenosis of the left main coronary artery $<$ 50%,
4. indications for medical therapy or CABG.

The severity of stenosis was assessed semi-quantitatively in angiography and expressed as the Gensini score (with the distinction of proximal Gensini score including LM, p-LAD, p-LCx and p-RCA and distal Gensini score including the other coronary artery segments) [8] (Figure 1).

Therapeutic strategy

The decision regarding the treatment strategy (CABG versus medical therapy) was made individually taking into consideration previous medical history, angiography and patient's preferences by the board of interventional cardiology and cardiosurgery experts. Patients underwent CABG using the standard method with extracorporeal circulation except one patient who underwent off-pump procedure at another institution. Only this patient did not undergo complete revascularisation – no bypass was implanted to the occluded RCA due to technical limitations. All patients received left internal mammary artery grafts to the left anterior descending artery and at least one saphenous vein graft to other revascularised coronary

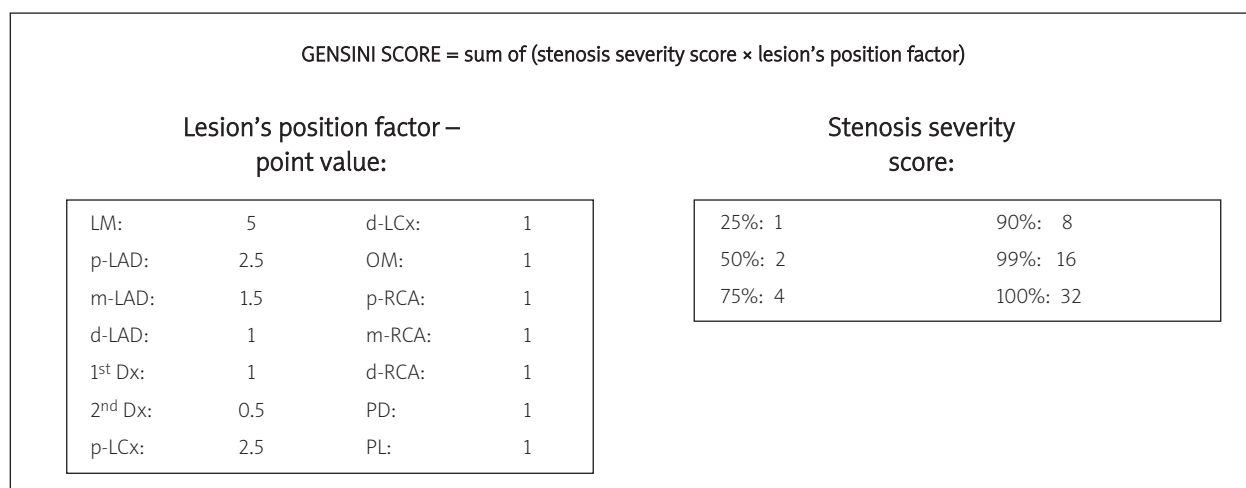


Figure 1. Principle of Gensini scoring calculation for evaluating the severity of coronary artery stenosis

LM – left main coronary artery, LAD – left anterior descending artery, Dx – diagonal branch, LCx – left circumflex artery, OM – obtuse marginal branch, RCA – right coronary artery, PD – posterior descending branch, PL – posterolateral branch, p – proximal, m – middle, d – distal

Table I. Clinical and demographic characteristics of the study group

	CABG group n = 55	Medically treated group n = 52	p
Male gender, n	43	36	NS
Age [years]	61.5 ± 8.5	64.6 ± 8.1	NS
Duration of angina [months]	28 (18-84)	72 (24-120)	0.004
Previous myocardial infarction, n (%)	40 (73)	33 (63)	NS
NYHA class	II (I-II)	II (I-III)	0.03
CCS class	2.5 (2-3)	2.5 (2-2.5)	NS
Renal failure, n (%)	0 (0)	3 (6)	NS
Hypertension, n (%)	53 (96)	51 (98)	NS
Diabetes, n (%)	27 (49)	24 (46)	NS
Impaired glucose tolerance, n (%)	18 (33)	16 (31)	NS
Obesity, n (%)	17 (31)	20 (38)	NS
BMI	28.3 ± 3.9	29.1 ± 3.9	NS
Smoking, n (%)	20 (36)	14 (27)	NS
Positive family history, n (%)	14 (25)	14 (27)	NS
Atrial fibrillation, n (%)	1 (2)	4 (8)	NS
Peripheral atherosclerosis, n (%)	6 (12)	12 (23)	NS
Medical history of stroke, n (%)	3 (5)	2 (4)	NS
EF [%]	47 ± 10	44 ± 13	NS
EF < 40%, n (%)	17 (31)	19 (36)	NS
Exercise test – mean peak exercise capacity (MET)	5.7 (4.6-7)	5.5 (4-7)	NS
Gensini score	90 (66-132)	91 (67-116)	NS
Proximal Gensini score	48 (30-98)	35 (10-80)	0.04
Distal Gensini score	38 (20-64)	50 (20-70)	NS
Gensini score > 100, n (%)	26 (47)	27 (52)	NS
ASA, n (%)	54 (98)	51 (98)	NS
Clopidogrel, n (%)	3 (5)	5 (10)	NS
ACEI, n (%)	54 (98)	52 (100)	NS
Beta-blocker, n (%)	55 (100)	49 (94)	NS
Statin, n (%)	54 (98)	50 (96)	NS
Nitrates, n (%)	44 (80)	39 (75)	NS
Digoxin, n (%)	3 (5)	7 (13)	NS
Diuretics	12 (22)	20 (38)	NS

The ranges presented for NYHA and CCS classes show the values of first and third quartiles.

arteries. Medical therapy recommendations were based on current guidelines of the European Society of Cardiology. All subjects after cardiac surgery underwent a 3-week programme of cardiac rehabilitation in centres specially designed for this purpose in Lodz.

There were 80 (75%) males and 27 (25%) females in the study group. Fifty five (51%) patients were referred for CABG whereas 52 (49%) patients were treated medically. Patients' characteristics, CAD risk factors' distribution and medical therapy are presented in Table I.

Baseline characteristics of both groups were similar. There were statistically significant differences in the duration of angina (angina lasted longer in patients treated medically, $p = 0.004$), functional class according to NYHA classification (symptoms of heart failure were more expressed in patients treated medically; $p = 0.03$) and in proximal Gensini score (the score was higher in patients undergoing surgery, $p = 0.04$).

The study protocol was accepted by the Bioethics Committee of the Medical University of Lodz. The study

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Quality of life assessment

The Polish version of the SF-36v2 questionnaire edited by the International Quality of Life Assessment Project was used for the quantitative assessment of QoL. The utility of this tool has been proved in multiple studies and projects comparing the results of its translations in cross-cultural research in many countries [9]. The questionnaire is made up of 8 scales assessing such parameters as: physical functioning (PF), social functioning (SF), limitations due to physical health problems (RP), bodily pain (BP), general health perceptions (GH), mental health (MH), limitations due to emotional problems (RE) and vitality (VT). By means of this questionnaire assessment of QoL can be performed within the mentioned subscales but also the global physical and mental health can be assessed. The physical component summary (PCS) consists of the following variables: physical functioning, social functioning, limitations due to physical problems and body pain. The mental component summary (MCS) incorporates general health perceptions, mental health, limitations due to emotional problems and vitality [10, 11].

The subjects completed the questionnaire at baseline ($n = 107$) and after 12 months of follow-up ($n = 93$). Completion of the questionnaire was each time verified and corrected if necessary during the patient's visit. All calculations of QoL parameters, including mental component summary (MCS) and physical component summary (PCS), were carried out according to the established algorithms.

During a 12-month follow, the occurrence of major adverse cardiac events [death, stroke, myocardial infarction (MI) and hospitalisation] was analysed.

Statistical analysis

Nominal data are presented as frequencies (n) and percentages within the groups. In the analysis of

quantitative variables, the distribution and the variable type were taken into account. Continuous and ordinal variables with a distribution other than normal are presented as medians with ranges between the first and third quartiles (range between the 25th and 75th percentile). Continuous data of normal distribution are presented as averages with standard deviations. A scale of nine degrees was assigned to the CCS and NYHA classifications so that it incorporated the semi-points (for example patients with angina classified as CCS class of II/III were assigned 2.5 points on this scale).

As most of the variables had a distribution other than normal, Mann-Whitney U test was used to compare the groups treated surgically or medically. Nominal data in both groups were compared using chi-square test. Unpaired and paired two-sample Student's t-test was used to compare the differences in various parameters of the QoL. A p value of < 0.05 was considered significant.

Results

During a 12-month follow-up 9 (8%) patients died: 6 (11.5%) patients in the medically treated group (2 patients died of MI, 2 patients died of a stroke and 2 patients died suddenly of unknown cause) and 3 (5.5%) patients in the surgically treated group (2 patients died perioperatively, 1 patient died of a stroke 3 days after surgery). There were significantly more hospital admissions to cardiology and medical wards due to exacerbation of angina in the medically treated group in comparison to the CABG group. There were comparable numbers of MI in both groups: 3 (6%) in the medically treated group and 1 (2%) in the CABG group. In 7 (15%) patients assigned to the medically treated group a palliative percutaneous coronary angioplasty with drug-eluting stent implantation to one of the coronary arteries (without complete revascularisation) was performed due to unstable angina. One patient from the CABG group had percutaneous coronary angioplasty of two coronary arteries in the course of MI 2 months after surgery (the angiogram showed all three grafts occluded). There were post-operative

Table II. Cardiovascular events in 12-month follow-up in the CABG and medically treated groups

	CABG group n (%)	Medically treated group n (%)	p
Death	3 (5.5)	6 (11.5)	NS
Myocardial infarction	1 (2)	3 (6)	NS
Stroke	4 (7)	4 (8)	NS
Hospital admissions	5 (9)	18 (35)	0.0003
MACE	10 (18)	24 (46)	0.002
PCI	1 (2)	7 (15)	0.04
Unstable angina	0 (0)	7 (13)	0.02
Post-operative complications	12 (22)	-	-

Abbreviations: PCI – percutaneous coronary intervention, MACE – major adverse cardiac events

Table III. Quality of life parameters in the study group at baseline and after 12 months of follow-up with regard to the treatment strategy

SF-36 version II	CABG before n = 55	CABG after n = 49	p	Medical treatment before n = 52	Medical treatment after n = 44	p
Physical functioning (PF)	44.3 ± 25	68.9 ± 23	0.0001	50.8 ± 25	56.0 ± 26	NS
Limitations due to physical problems (RP)	40.2 ± 26	54.6 ± 26	0.003	40.3 ± 24	46.9 ± 24	NS
Bodily pain (BP)	40.0 ± 30	70.9 ± 26	0.0001	41.1 ± 24	60.3 ± 30	0.0004
General health perceptions (GH)	28.3 ± 15	36.5 ± 11	0.001	31.3 ± 12	32.4 ± 15	NS
Vitality (VT)	40.2 ± 23	58.8 ± 19	0.0001	41.6 ± 20	46.7 ± 23	NS
Social functioning (SF)	51.1 ± 26	68.4 ± 21	0.0002	53.1 ± 28	60.8 ± 25	NS
Limitations due to emotional problems (RE)	53.2 ± 29	65.8 ± 25	0.01	48.7 ± 28	58.1 ± 27	0.05
Mental health (MH)	51.3 ± 21	65.5 ± 18	0.0002	51.3 ± 21	55.7 ± 18	NS
Mental component summary (MCS)	37.8 ± 17	44.2 ± 20	0.001	36.3 ± 23	39.8 ± 21	NS
Physical component summary (PCS)	34.3 ± 34	42.6 ± 30	0.0008	37.2 ± 30	39.1 ± 32	NS

Table IV. Quality of life parameters in the CABG group vs. the medically treated group at baseline and after 12 months of follow-up

SF-36 version II	CABG before n = 55	Medical treatment before n = 52	p	CABG after n = 49	Medical treatment after n = 44	p
Physical functioning (PF)	44.3 ± 25	50.8 ± 25	NS	68.9 ± 23	56.0 ± 26	0.007
Limitations due to physical problems (RP)	40.2 ± 26	40.3 ± 24	NS	54.6 ± 26	46.9 ± 24	0.07
Bodily pain (BP)	40.0 ± 30	41.1 ± 24	NS	70.9 ± 26	60.3 ± 30	0.04
General health perceptions (GH)	28.3 ± 15	31.3 ± 12	NS	36.5 ± 11	32.4 ± 15	0.07
Vitality (VT)	40.2 ± 23	41.6 ± 20	NS	58.8 ± 19	46.7 ± 23	0.004
Social functioning (SF)	51.1 ± 26	53.1 ± 28	NS	68.4 ± 21	60.8 ± 25	0.06
Limitations due to emotional problems (RE)	53.2 ± 29	48.7 ± 28	NS	65.8 ± 25	58.1 ± 27	NS
Mental health (MH)	51.3 ± 21	51.3 ± 21	NS	65.5 ± 18	55.7 ± 18	0.005
Mental component summary (MCS)	37.8 ± 17	36.3 ± 23	NS	44.2 ± 20	39.8 ± 21	0.05
Physical component summary (PCS)	34.3 ± 34	37.2 ± 30	NS	42.6 ± 30	39.1 ± 32	NS

complications such as pneumothorax, infections or stroke that required prolonged stay in hospital or additional post-operative rehabilitation in 12 (22%) patients from the CABG group. All cardiovascular events during the follow-up are shown in Table II.

Quality of life analysis was performed according to therapeutic strategy – medical versus surgical treatment, and according to patients' gender, since it was often an interfering variable. In each group the subjectively assessed efficacy of the therapy was analysed. Regardless of their gender, all patients treated with CABG significantly improved their QoL (in all eight parameters measured in SF-36 questionnaire version 2) after 12 months of follow-up. In medically treated patients only two parameters – BP and RE, were significantly different from baseline (there

was no difference in physical and mental components summary), as shown in Table III, and patients' gender did not influence the results.

There was no difference in QoL at baseline. After 12 months of follow-up there was a significant improvement in QoL in patients treated with CABG as compared with the medically treated group (Table IV).

There was no difference in QoL between men and women treated medically, either at baseline or after 12 months of follow-up. In the CABG group women had significantly lower QoL compared to men with regards to PE, RE, MH and VT. After 12 months of follow-up there was an increase in PE and RE (the difference between men and women was no longer significant) and a mild improvement in MH and VT in women in comparison to men – Tables V and VI.

Table V. Quality of life parameters in the study group at baseline and after 12 months of follow-up with regards to the treatment strategy and patients' gender

SF-36 version II	Medical treatment before ♂ n = 14	Medical treatment before ♀ n = 38	p	Medical treatment after ♂ n = 14	Medical treatment after ♀ n = 38	p
Physical functioning (PF)	42.5 ± 24	53.8 ± 25	NS	51.9 ± 26	57.7 ± 26	NS
Limitations due to physical problems (RP)	42.8 ± 26	39.3 ± 24	NS	47.1 ± 21	47.7 ± 26	NS
Bodily pain (BP)	42.3 ± 31	40.7 ± 21	NS	57.7 ± 29	61.3 ± 30	NS
General health perceptions (GH)	30 ± 9	31.7 ± 13	NS	29.2 ± 11	33.7 ± 16	NS
Vitality (VT)	36.6 ± 25	43.4 ± 18	NS	42.8 ± 21	48.3 ± 24	NS
Social functioning (SF)	55.3 ± 29	52.3 ± 27	NS	59.6 ± 19	61.3 ± 28	NS
Limitations due to emotional problems (RE)	44 ± 32	50.4 ± 27	NS	56.4 ± 23	58.9 ± 29	NS
Mental health (MH)	47.1 ± 24	52.9 ± 20	NS	52.3 ± 13	57.1 ± 19	NS
Mental component summary (MCS)	35.1 ± 18	36.8 ± 22	NS	38.4 ± 19	40.4 ± 23	NS
Physical component summary (PCS)	35.5 ± 33	37.9 ± 30	NS	38.2 ± 32	39.5 ± 32	NS

Table VI. Quality of life parameters in the study group at baseline and after 12 months of follow-up with regards to the treatment strategy and patients' gender

SF-36 VERSION II	CABG before ♂ n = 13	CABG before ♀ n = 42	p	CABG after ♂ n = 13	CABG after ♀ n = 42	p
Physical functioning (PF)	29.6 ± 20	48.8 ± 25	0.007	59.6 ± 25	71.9 ± 22	0.06
Limitations due to physical problems (RP)	28.8 ± 20	41.7 ± 27	0.06	45.8 ± 19	57.4 ± 28	NS
Bodily pain (BP)	31.6 ± 25	42.6 ± 31	NS	56.4 ± 27	65.8 ± 24	NS
General health perceptions (GH)	31.5 ± 17	27.3 ± 14	NS	35.8 ± 9	36.7 ± 12	NS
Vitality (VT)	29.8 ± 18	43.4 ± 23	0.03	44.8 ± 16	63.3 ± 18	0.001
Social functioning (SF)	41.3 ± 19	54.1 ± 27	0.06	61.4 ± 19	70.6 ± 21	NS
Limitations due to emotional problems (RE)	37.2 ± 26	58.1 ± 28	0.01	57.6 ± 25	68.5 ± 26	0.1
Mental health (MH)	40.4 ± 20	54.6 ± 20	0.01	54.6 ± 16	69.0 ± 17	0.006
Mental component summary (MCS)	31.7 ± 16	39.7 ± 22	NS	39.1 ± 20	43.9 ± 20	NS
Physical component summary (PCS)	31.6 ± 32	35.1 ± 31	NS	39.6 ± 30	42.6 ± 30	NS

Discussion

In the treatment of patients with stable angina we should be aiming at, on one hand, reducing the number of cardiovascular complications including MI and death due to cardiovascular causes in short- and long-term follow up, and, on the other hand, at improving QoL mostly by minimising the symptoms of the disease. Achieving this goal requires a well-qualified therapeutic team as well as good cooperation on the patient's side. Optimal pharmacological therapy according to evidence-based medicine supported by interventional methods (both percutaneous and surgical) should always be accompanied by a change in lifestyle involving modification of cardiovascular risk factors. Patients with MCAD require

special care because of the usually long course of the disease, a severe degree of angina, a coexisting left ventricular dysfunction of variable degree, a high risk of acute coronary syndrome and a high incidence of multiple coronary risk factors. Additionally, there is no clear classification system or clear diagnostic criteria in this subgroup of patients. Therefore, the mortality of MCAD patients is exceptionally high and reaches from 10 to even 60% during a 5-year follow-up, depending on the severity of coronary stenosis and other risk factors [12-15].

The 107 patients included in the study had very severe and diffuse stenosis of coronary arteries (median Gensini score was 90 and the value of the score was above 100 in 50% of patients) and coexisting left ventricular dysfunction (average EF was 46%, in 34% of patients it was < 40%).

This made the study population a group of very high cardiovascular risk. The baseline characteristics were very similar in both medically and surgically treated patients. There were significant differences in the duration of the disease and the class of heart failure symptoms according to NYHA. Parameters of QoL at baseline were comparable in both groups but much lower than in the healthy population.

The results of our 12-month prospective study confirmed the superiority of cardiosurgical treatment (CABG) over medical treatment which is in agreement with the established clinical practice. The incidence of MACE was significantly higher in medically treated patients than in patients treated with CABG (46 vs. 18%; $p = 0.0019$). The choice of medical strategy was associated with almost 4 times higher risk of MACE during 12-month follow-up (odds ratio OR 3.86; 95% CI 1.65-9.04). Additionally, there was a higher reduction of angina expressed as CCS class ($p < 0.0001$) and of heart failure symptoms expressed as NYHA class ($p = 0.003$) in the CABG group. Analysis of the SF-36 questionnaire showed that better control of symptoms obtained by means of surgical revascularisation results in markedly higher improvement of patients' well-being expressed as an increase in all measured parameters of physical and mental health.

Our results confirmed previous data regarding the place of cardiosurgical treatment in MCAD. Although we were not able to find any data in literature comparing the QoL in patients undergoing CABG versus medically treated subjects in a population similar to our study group, the superiority of cardiosurgical revascularisation over percutaneous intervention with regards to QoL in both low- and high-risk patient groups has been previously demonstrated [16]. In one of the biggest studies on this topic – BARI (the Bypass Angioplasty Revascularisation Investigation), with a study group of 3610 patients with stable MCAD, it has been shown that patients treated with CABG had significantly higher QoL than patients undergoing percutaneous coronary angioplasty during a 1-year, 2-year and 3-year follow-up [17]. Also, it has been shown that QoL was significantly higher in subjects treated surgically than in subjects treated percutaneously in the study group of 543 high-risk patients with acute coronary syndrome without ST-elevation [18].

The presence of very severe atherosclerosis in our study group is a major aspect that requires an additional comment. The choice of the treatment strategy was made by an independent board of interventional cardiology and cardiosurgery experts according to the previous course of disease and angiography result as importantly as to patient's own preferences. During one-year follow-up 7 patients had palliative coronary angioplasty performed as a life-saving procedure (in the course of acute coronary syndrome). Therefore, our results can not be directly compared to studies comparing the QoL in patients

treated medically or surgically that were published several years ago, when the patients' characteristics and selection criteria were clearly different than nowadays.

Conclusion

The results of a prospective 12-month follow-up of high-risk patients with MCAD confirmed the superiority of cardiosurgical treatment (CABG) over medical therapy. Surgical treatment as compared to medical therapy resulted in a decreased risk of MACE, markedly reduced angina and heart failure symptoms as well as increased QoL. A significant improvement in all parameters of physical and mental health assessed by SF-36 questionnaire after CABG encourages referring for surgical treatment patients with very severe atherosclerosis even in case of a very high perioperative risk at baseline.

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Jakość życia pacjentów o wysokim ryzyku ze stabilną wielonaczyniową chorobą wieńcową leczonych zachowawczo lub kardiochirurgicznie – obserwacja 12-miesięczna

Radosław Kręcki¹, Jarosław Drożdż¹, Piotr Szcześniak², Jarosław D. Kasprzak¹, Jan Z. Peruga¹, Piotr Lipiec¹, Karina Wierzbowska-Drabik¹, Jakub Foryst¹, Daria Orszulak-Michalak², Maria Krzemińska-Pakuła¹

¹ II Katedra i Klinika Kardiologii, Uniwersytet Medyczny, Łódź

² Katedra Biofarmacji, Uniwersytet Medyczny, Łódź

Streszczenie

Wstęp: Metody leczenia stosowane współcześnie w chorobach przewlekłych, do których z pewnością należy miażdżyca, prowadzą zazwyczaj do okresowej poprawy, a średnio- i długoterminowe rezultaty nie zawsze są w pełni satysfakcjonujące. Poprawa jakości życia powinna być w związku tym głównym kryterium kwalifikacji pacjentów do procedur zabiegowych, często obciążonych wysokim ryzykiem.

Cel: Ocena jakości życia pacjentów z wielonaczyniową chorobą wieńcową leczonych kardiochirurgicznie (CABG) lub zachowawczo.

Metody: Do badania włączono 107 chorych z potwierdzoną angiograficznie stabilną, wielonaczyniową chorobą wieńcową – 80 (75%) mężczyzn i 27 (25%) kobiet. Pięćdziesięciu pięciu (51%) chorych zostało zakwalifikowanych do leczenia operacyjnego (CABG), a 52 (49%) było leczonych zachowawczo. Średnia wartość wskaźnika Gensini w grupie wyniosła 90 (66–132). Do oceny ilościowej jakości życia użyto kwestionariusza SF-36, opracowanego w ramach *International Quality of Life Assessment Project*.

Wyniki: W trakcie 12-miesięcznej obserwacji zmarło łącznie 9 (8%) chorych: 6 (11,5%) w grupie leczonej zachowawczo, 3 (5,5%) w grupie leczonej kardiochirurgicznie. Pacjenci z grupy leczonej zachowawczo wymagali istotnie częściej hospitalizacji na oddziałach internistycznych lub kardiologicznych z powodu zaostrzeń choroby wieńcowej w porównaniu z grupą CABG (20 vs 5, $p = 0,003$). Analiza kwestionariusza SF-36 wykazała istotną statystycznie poprawę wszystkich ośmiu parametrów ocenianych w formularzu w grupie badanej, niezależnie od przyjętej strategii terapeutycznej. Wyliczone zgodnie z algorytmem całkowite zdrowie psychiczne (MCS) i fizyczne (PCS) było istotnie lepsze po 12 miesiącach obserwacji. Pacjenci leczeni kardiochirurgicznie odnieśli większą korzyść pod względem poprawy jakości życia w porównaniu z chorymi leczonymi zachowawczo. Istotność statystyczną uzyskały aktywność życiowa (PF), ból fizyczny (BP), żywotność (VT), zdrowie psychiczne (MH) oraz całkowite zdrowie psychiczne (MCS).

Wnioski: Leczenie kardiochirurgiczne pacjentów o wysokim ryzyku z wielonaczyniową chorobą wieńcową w porównaniu z optymalną farmakoterapią skutkuje wyraźniej zaznaczonym spadkiem ryzyka niepożądanych zdarzeń sercowo-naczyniowych, redukcją objawów dławicy, objawów niewydolności krążenia, jak również poprawą jakości życia pod względem fizycznym i psychicznym. Istotna poprawa w zakresie wszystkich parametrów zdrowia psychicznego i fizycznego po zabiegu CABG skłania do większej odwagi w kwalifikacji pacjentów z bardzo nasilonym procesem miażdżycowym do leczenia zabiegowego, nawet w przypadku wyjściowo bardzo wysokiego ryzyka okotoprocuduralnego.

Słowa kluczowe: wielonaczyniowa choroba wieńcowa, jakość życia, leczenie

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Adres do korespondencji:

dr n. med. Radosław Kręcki, II Katedra i Klinika Kardiologii, Uniwersytet Medyczny, ul. Kniaźwiczka 1/5, 91-347 Łódź, tel.: +48 42 251 60 11, e-mail: rkrecki@gazeta.pl

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