



The Relationship between Sexual Dysfunction and Quality of Life among the Patients with Coronary Artery Bypass Graft Surgery compared to Normal People

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Abstract

Present study was aimed to specify the relationship between intervention in sexual functioning and Quality of Life in patients with Coronary Artery Bypass Graft (CABG) surgery. The study was a casual comparative research type. The sample size was 100 people who were all married men among which 50 ones were patient and remaining were normal. Pearson correlation coefficient was used due to quantitative variable of Quality Of Life (QOL) and sexual dysfunction. Given the analysis results, there is a negative significant correlation between sexual dysfunctions and Quality of Life in tow groups ($P < 0.05$). Furthermore, here was a significant difference in a comparison between normal and patient groups in terms of Quality of Life indicator. Findings indicated that the patients who had undergone CABG were with lower Quality of Life and the higher sexual dysfunction. Therefore, successful treatment for sexual disability can improve sexual satisfaction and enhance QOL and life expectancy in patients with Coronary Artery Bypass Graft.

Keywords: Coronary Artery Bypass Graft (CABG), sexual functioning, sexual dysfunction, Quality Of Life (QOL).

Introduction

Coronary artery diseases are the most important cardiovascular dysfunction and a worldwide health problem. It is predicted that by 2020, the number of cardiovascular disease-related deaths will reach about 25 million per year and it will be the most conventional cause of death^{1,2}, which is known as the first reason for debilitating diseases by World Health Organization³. For patients with coronary artery disease, onset of disease means deviation from the normal course of life⁴. Today, open-heart surgery technique is one of the effective and reliable methods in the treatment of cardiovascular diseases¹. However, Coronary Arteries Bypass Graft (CABG) surgery is a procedure in which some links are employed to lead blood flow around platelets in coronary arteries. Such a procedure is used when artery is basically either narrow/blocked or blood clot is placed in the narrow regions. Although lots of patients' Quality Of Life (QOL) is improved due to decreased angina symptoms and increased cardiac function after coronary artery bypass surgery⁵, in some patients QOL is not improved and even they find a situation worse than before the surgery⁶. Besides, since sexual behaviors are accounted as an important and necessary part of couples' life and provides their sexual quality of life⁷, sexual health and sexual functioning are important factors of life satisfaction. A successful sexual functioning improves sexual satisfaction which itself enhances quality of life and reduces

depression signs. Sexual Dysfunction may be the first symptoms in cardiovascular and neurological disorders⁸.

Plenty of researchers studied the relationship between sexual dysfunction and QOL of patients with CABG surgery such that different results were reported. In this regard we can cite following studies: Sexual functioning and power often are not asked by physicians; thereby patients avoid referring such problems. In most cases, the patients with heart diseases such as Angina, heart failure, Myocardial Infarction (MI) suffer erectile dysfunction and this defective process in sexual functioning is a factor for depression and will result in reduced Quality of life^{9,10}. However, Sánchez-Cruz, et al (2003) studied 2467 Spanish men to investigate on the relationship between QOL and Erectile Dysfunction. These men were 25 to 70 years old. In this study, International Index of Erectile Function (IIEF) was used. The results indicate that erectile dysfunction severity is accompanied by reduction in Quality of Life score¹¹.

In addition, Mohamed et al conduct a study on 100 patients undergoing CABG surgery. This study suggests that CABG surgery can reduce patients' sexual Quality of Life. The results before the surgery show a significant relationship between age, diabetes, blood pressure, high fat, and scores of erectile dysfunction ($P < 0.001$)¹². Evaluation of vascular risk factors in these people indicates that such factors increase affect on

erectile dysfunction. Erection is a phenomenon caused by blood flow and any disorder in this phenomenon can lead to sexual disability¹³. Furthermore, Justo et al (2010) study prevalence of erectile dysfunction in old people with Coronary Artery Disease. This study was conducted in a statistical society composed of 122 patient and health men. The results indicate that sexual dysfunction in men with Coronary Artery Disease is higher than the men without the disease¹⁴.

Besides, Rezaei indicates Sexual function disorders are common among End-Stage Renal Disease patients undergoing hemodialysis treatment. The dysfunction of sexual activity in the patients group is a multi-factorial phenomenon. Although Sexual function disorders are originated from different roots, primary causes of sexual dysfunction are organic in patients with Chronic Kidney Diseases. Uremic milieu, all of peripheral neurovascular complications due to some systemic diseases, hormonal changes, and some medications can lead to sexual difficulties in these patients. However, among sexual dysfunctions, erectile dysfunction is the most prevalent¹⁵. Also, quantity of blocked arteries, diabetes mellitus, high pressure and smoking enhance sexual dysfunction. Similar results were also obtained by Pamela et al¹⁶.

Given the increasing process of Coronary Artery Diseases which revolutionize the lifestyle of patient and his/her family, we will understand importance and impact of Quality Of Life among such patients as more as possible. As a result, the necessity to study and measure QOL will be quite clear to determine appropriate treatment ways as well as treatment results evaluation for Coronary Artery patients. Therefore, present study was aimed to specify the relationship between intervention in sexual functioning and Quality Of Life in patients with Coronary Artery Bypass Graft surgery and analyze sexual function sub-scales about such patients.

Material and Methods

Present paper is a casual comparative research type (ex post facto). The statistical universe here was composed of the patients undergone CABG surgery in Day, Shariati, Kasra and Laleh hospitals in 2010 and their relatives were considered as control group. The sampling method was purposive type. The sample size was 100 people who were all married men among which 50 ones were patient and remaining were normal which both became matched in terms of age and level of education. The subjects were 55 to 75 years old and their least level of education was Diploma. The patients with systematic diseases (e.g. kidney, liver, thyroid, diabetes and adrenal diseases as well as abnormal blood) or under treatment by psychiatric medicines were excluded from study. After 12 weeks from surgery, the patients referred to Dr. Mandegar's Clinic during which research consent form obtained from subjects and research objectives were described for them.

Then, personal information form, Quality of Life questionnaire

and sexual dysfunction questionnaire were filled by the patients. In addition, those questionnaires were also filled by one of the relatives of patients as a member of control group. The personal information form- provided by the researcher- was used to collect data besides which health survey (SF36) and sexual dysfunction (SFQ) questionnaires were used. The former included 36 questions in eight sections and each section was scored in a range of 0-100 so that the higher score means better quality of life. The latter included 38 questions and studied sexual functioning in different sexual desire, erection, ejaculation and orgasm fields based on DSMTV.TR. Some questions were designed special for ladies and some for men. The sampling took 3 months after which, descriptive and inferential statistics were used to analyze data. Since of the patients did not fill the questionnaire, he was excluded from study and present study carried on by 99 samples.

Quality of life (QOL) is a multi-dimensional concept, which encompasses crucial areas such as physical health, psychological well-being, social relationships, economic circumstances, personal beliefs and their relationships to salient features of the environment¹⁷. Pearson correlation coefficient was used due to quantitative variable of quality of life and sexual dysfunction which resulted in considerable results and probability value lower than 0.05 ($P < 0.05$) was considered as significant. Also, Cronbach's Alphabet test was used for validation of sexual dysfunction questionnaire.

Results and Discussion

The frequency of sexual dysfunctions was studied in patients 12 weeks after Coronary Artery Bypass Graft Surgery and according the results, the scores range between 0 and 62. The highest standard deviation score was dedicated to masturbation sexual dysfunction which was 8.00. The highest mean score was obtained for ejaculation sexual dysfunction (mean= 15.34). In order to study the relationship between sexual dysfunction and Quality Of Life among patients, Pearson correlation test was used.

The results indicated that there is a negative significant correlation between sexual dysfunctions, sexual arousal, erection, masturbation and ejaculation with QOL ($P < 0.05$). In fact, the lower quality of life score in patients, the higher sexual dysfunction score ($R = -0.56$). The highest negative correlation was between ejaculation and Quality of Life with a score of -0.21. These results are presented in table-1.

In table-2, the relationship between sexual dysfunction and QOL among normal people is studied which suggests that the correlation between sexual desire, sexual arousal, erection, masturbation and ejaculation with Quality of Life was negative but insignificant. Also, the correlation between total score of sexual dysfunction and Quality of Life was negative which is significant at $P < 0.05$ ($R = -0.43$).

Table-1
The relationship between sexual dysfunctions and Quality Of life in patients with Coronary Artery Bypass Graft Surgery

Variable	Variable/ Statistics	Quality of Life
Sexual Desire	Correlation Coefficient	-0.20
	Significance level	0.14
	Sample Size	49
Sexual Arousal	Correlation Coefficient	-0.80
	Significance level	0.56
	Sample Size	49
Erection	Correlation Coefficient	-0.13
	Significance level	0.35
	Sample Size	49
Masturbation	Correlation Coefficient	-0.14
	Significance level	0.33
	Sample Size	49
Ejaculation	Correlation Coefficient	-0.21
	Significance level	0.13
	Sample Size	49
Total Score	Correlation Coefficient	-0.56
	Significance level	0.05
	Sample Size	49

There is a significant difference in a comparison between normal and patient groups in terms of Quality of Life indicator, that is, the QOL indicator in normal and patient groups was 46.02 and 42.88, respectively, which indicated higher Quality of Life scale in normal group. Also, there was a significant difference in terms of sexual functioning sub-scales. Among sub-scales, sexual arousal, erection sub-scales showed a significant difference in favor of the normal group and mean scores of two mentioned sub-scales were higher in normal group (table-3).

Sexual health and functioning are important determinants for quality of life. Such disorders as erectile dysfunction are increased by becoming older. 50% of men with sexual disability or erectile dysfunction have also Coronary Artery Disease⁹. Lots of researchers indicated that there is a direct relationship between prevalence of sexual dysfunction and atherosclerosis and severity of sexual disorders has also direct relationship with Severity of Coronary Heart Disease (CAD) in angiography¹³.

Table-2
The relationship between sexual dysfunctions and Quality Of life in normal people

Variable	Variable/ Statistics	Quality of Life
Sexual Desire	Correlation Coefficient	-0.16
	Significance level	0.06
	Sample Size	50
Sexual Arousal	Correlation Coefficient	-0.14
	Significance level	0.09
	Sample Size	50
Erection	Correlation Coefficient	-0.13
	Significance level	0.12
	Sample Size	50
Masturbation	Correlation Coefficient	-0.04
	Significance level	0.62
	Sample Size	50
Ejaculation	Correlation Coefficient	-0.08
	Significance level	0.36
	Sample Size	50
Total Score	Correlation Coefficient	-0.43
	Significance level	0.05
	Sample Size	50

Table-3

The comparison of Quality Of Life indicator and sexual dysfunction sub-scales among both patient and normal groups

Sub-scale	Group	Sample size	Mean	Standard Deviation	F	df	P
Quality of Life indicator	Patient	49	42.86	7.14	0.993	97	0.039
	Normal	50	46.02	7.86			
Sexual Desire	Patient	49	6.95	2.13	0.064	97	0.968
	Normal	50	6.94	2.53			
Sexual Arousal	Patient	49	4.81	1.46	0.264	97	0.034
	Normal	50	5.94	3.57			
Erection	Normal	50	5.94	3.57	4.61	97	0.034
	Patient	49	7.16	1.62			
Masturbation	Normal	50	7.89	2.11	0.964	97	0.934
	Patient	49	8.06	8.07			
Ejaculation	Normal	50	7.96	3.10	0.133	97	0.447
	Patient	49	15.42	2.11			
Total Score	Normal	50	15.06	2.65	0.080	97	0.352
	Patient	49	42.42	8.03			

Given the analysis of our results, frequency of sexual dysfunctions is higher among the patients who had undergone CABG surgery compared to normal people. This finding is in harmony with Mohamed et al and Justo et al^{12,14}. According to these findings, it can be concluded that the majority of patients after coronary arteries surgery suffer relatively same sexual dysfunction problems. Another finding here indicated that the patients who had undergone CABG surgery are with lower Quality of Life and the higher sexual dysfunction, the lower Quality of Life. In this regard, Pamela and Stanley and Brosman can be mentioned^{9,16}. Such studies address that defective process in Sexual Dysfunction leads to depression in coronary artery patients and Quality Of Life will be dropped. Sexual Dysfunction, particularly in terms of sexual desire, is related to QOL drop.

Our results suggest that fear of sexual activity causes to reduce sexual activity motivation and affects on sexual life quality. Also, sexual dysfunction is also accompanied by Quality of Life drop regarding sexual arousal.

The higher sexual dysfunction, the lower Quality of Life; this finding is in line with Stanley and Brosman⁹. The studies show that medical conditions such as cardiovascular diseases, diabetes and depression are most probably correlated with Erectile Dysfunction and such a disorder leads to reduce QOL and thereby is a serious problem for public health. Furthermore, Sánchez-Cruz et al addresses that Erectile Dysfunction severity is along with reduced Quality of Life¹¹. When sexual life satisfaction is a predictor for Quality of Life, it is not surprising that the men with sexual dysfunction have lower Quality of Life¹³.

Also, present paper showed that the Quality of Life for normal people and that for the patients group undergoing CABG surgery are different. This finding is in harmony with Pamela et al¹⁶. Justo et al also argue that QOL among men with CAD is in lower level compared to that of normal people¹⁴. These results approve our findings.

Conclusion

The patients with Coronary Artery Disease suffer problems and issues in different aspects including physical activities, social interactions, sexual interactions, feelings and emotions. In most of cardiovascular diseases, pain, shortness of breath, limitation of physical activity, sexual dysfunction and many other problems are arisen which all lead to reduce Quality Of Life. In past, disease detection and treatment methods were conducted only according to objective factors. But, QOL today has been become as the most important indicator to evaluate treatment methods and health definition has a wider extent. Therefore, in addition to suitable physical status, mental factors, experiences, behaviors and psychosocial mood should also be taken into consideration. A successful treatment for sexual disability can

improve sexual satisfaction and enhance QOL and life expectancy which is less paid into attention for treatment of cardiovascular diseases.

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