Effect of Preoperative Information and Reassurance in Decreasing Anxiety of Patients Who are Candidate for Coronary Artery Bypass Graft Surgery

Fariborz Akbarzadeh MD\textsuperscript{1*}, Fatemeh Ranjbar kouchaksaraei MD\textsuperscript{2}, Zahra Bagheri Msc\textsuperscript{2}, Mohammad Ghezel MD\textsuperscript{2}

1. Dept.of Cardiology, Cardiovascular Research Center, Tabriz University of Medical Sciences, Tabriz, Iran.
2. Dept.of Psychiatry, Tabriz University of Medical Sciences, Tabriz, Iran.

(Received 27 May 2009; Accepted 30 Jul 2009)

Abstract

**Background:** Psychological problems like as anxiety in patients who are candidate for coronary artery bypass graft (CABGs) may increase mortality and morbidity. The effect of reassurance and preoperative information in decreasing of anxiety is uncertain. This study designed to address the effect of preoperative information and reassurance in decreasing of anxiety of patients who are candidate for CABGs.

**Methods:** With experimental study and randomize sampling 85 (55 male and 30 female) of 238 patients who were candidate for CABGs included and completed spilberger anxiety test on the day of admission. Preoperative information and reassurance done and test completed again on the day before surgery.

**Results:** Mean number of anxiety score in patients with mild anxiety disorder (21 patients) were 34± 4.2 before and 39±5.8 after intervention. In patients with moderate anxiety disorder (39 patients) the number decreased from 52.61±3.8 to 50.76±56. Twenty five patients had severe anxiety disorder before with number of 63.88±2.8 which decreased to 53.88±7.6. All of differences were significant statistically.

**Conclusion:** In patients with mild anxiety preoperative information and reassurance resulted in increasing of anxiety but in patients with moderate or severe anxiety disorder, anxiety level decreased significantly.

*Corresponding Author: Fariborz Akbarzadeh MD, Department of Cardiology, Cardiovascular Research Center, Tabriz, University of Medical Sciences, Iran. Tel: 0411-3357768 E-mail: Akbarzadehf@tbzmed.ac.ir*

**Keywords:** Preoperative information ● Reassurance ● Anxiety ● Spilberger test
Introduction

Mortality and morbidity of cardiovascular diseases are leading cause of death in the world and in our country. Coronary artery bypass surgery (CABGs) is one of the good and effective ways for treatment of coronary artery disease (CAD). It is an expensive surgery and part of expense of surgery is related to psychologic problems which are omitting usually. Fear and anxiety are routine psychologic response before CABGs. These responses have bad impact on healing after CABGs and may increase mortality and morbidity.\textsuperscript{1,2} Anxiety and fear of CABGs are usually related to low knowledge of patients regarding their surgery.\textsuperscript{3} Saying of feeling by patients is shown to be effective in decreasing their anxiety.\textsuperscript{4,5} Finding a simple and easy way to decrease anxiety of patients can help patients to recover soon and will decrease the expense of surgery. On the other hand some studies showed that education before CABGs has no effect or worsen the anxiety of patients.\textsuperscript{6} Because these controversies this study was done to address the effect of reassurance and education on decreasing patient's anxiety before CABGs.

Methods

With experimental study in the form of before and after intervention 85 of 256 patients who were candidate for CABGs for the first time selected randomly to be studied during 6 months. Patient's with following criteria were excluded from the study: 1. alcohol and opiate use 2. history of Anti anxiety drugs taking 3. history of psychiatric disorder. After fully explanation to the patients and obtaining written informed consent, all patients completed Spilberger questionnaire on the same day. Reassurance and education was done and test repeated the day before surgery. All education programs were done by one psychologist and all nursing educations stopped.\textsuperscript{7} Spilberger Questionnaire State – Trait Anxiety Inventory (STAI) is one of the well defined questionnaires for evaluation of state and trait anxiety. In this study state anxiety questionnaire was used. Validity of test checked and α coefficient of kronchonback in reliability of test was 91%. There is a good correlation of this test with other tests like as Beck anxiety inventory.\textsuperscript{11} Reliability of this test had been studied by Axon was α=0.94 for Iranian people.\textsuperscript{9} Mean score of Spilberer Test was calculated and statistical analysis was done with paired sample t-test by spss 11.5 for windows soft ware.

Results

85 patients included in the study. 55 patients were male (64.7%), mean age of patients were 54.81±9.4 years. 21.2% of patients were uneducated, 15.3% patients were university educated. Severity of primary anxiety disorder were mild in 24.7%, Moderate in 45.9% and severe in 29.4% of our patients. At starting of study mean score of anxiety was 47.31 and 57.43 in men and women respectively. This difference was statistically significant with p<0.0001. Difference between patients on the base of their education level was not significant (p=0.04). Among patients with mild anxiety mean score changed from 34±4.2 to 39.38±5.8 after reassurance education which was statistically significant (p=0.0001). These numbers changed from 52.61±3.8 to 50.75±5.4 (p=0.052) and 63.88±2.8 to 53.88±7.6 (p=0.0001) among patients with moderate and severe anxiety disorders. These differences were statistically significant in patients with severe anxiety.
**Discussion**

Women experienced more anxiety than men before surgery. In patients with severe anxiety disorders education could decrease the score of anxiety. This result is in contrast to studies which showed anxiety decrease among all patients.\(^{10-13}\) Patients with moderate anxiety showed borderline decrease with reassurance, this is along with study which done in Beirut in year 2006.\(^{14}\) Our patients with mild anxiety experienced exacerbation of their situation with reassurance and education therapy. Some studies showed no effect of reassurance on decreasing of anxiety\(^{6,14,19}\) and one controlled randomized trial reported no any benefit of pre surgery education and even longer hospital stay no any.\(^{20}\) Trans telephonic talking with patients about their surgery resulted in increasing anxiety in one study.\(^{20}\) We found three types of responses in our patients: Exacerbation with mild anxiety, No response in patients with moderate anxiety and decreasing effect in patients with severe anxiety. It looks like that knowing of suppressed emotion may disturb the balance between consciousness and unconsciousness components of defense mechanism and may increase anxiety in short course. For evaluation of this theory large scaled and controlled trials should be done. As a conclusion we suggest to do reassurance and education programs in patients with severe anxiety.

**Acknowledgments**

We are happy to thank all of our patients, nursing or people who helped us to do this research project. We also appreciate research deputy of faculty of medicine for their economic support.

**References**


