

An Examination of the Patients' Personality Profiles before Angiography or Heart Surgery

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Abstract

Background-Scientists have long been puzzled by the fact that many heart attacks occur in patients who do not have any predisposing factors such as high blood pressure, smoking, and high cholesterol, and they have always wanted to ascertain what causes these heart attacks. The answer, according to some, may lie not merely in physiology but behavior. In the last 30 years, a small group of scientists has held steadfastly to the hypothesis that the way people think, feel, and act as they cope with the daily stresses of life can have a profound and some times deadly- effect on their heart.¹ In this study we wanted to evaluate the patient's personality profile before angiography or heart surgery.

Methods-Two hundred and ten patients who needed angiography or heart surgery were selected to complete the following questionnaires – SCL 90 personality test, general knowledge, demographic questionnaire, and surgical questionnaire.

Results- The personality traits of patients are susceptible to change before angiography and heart surgery, but according to the GSI standard, these changes are limited to the neurotic phase.

Conclusion-The presence of psychiatrists and clinical psychologists are useful and the employment of psychotherapy, psychoanalytic techniques, and education of patients can maximize the result of heart surgery as well (*Iranian Heart Journal 2003; 4 (4):57-59*).

Key words: personality ■ Angiography ■ Heart Surgery

Cardiovascular diseases are one of the most common diseases of our times, the number of patients increasing annually. Statistical surveys indicate that 1000 to 1300 people die of cardiovascular diseases in Tehran every month.²

Through thousands of interviews with heart attack patients, these researchers have discerned common traits, behavioral responses, and stress reactions that appear to be associated with increased risk for heart disease. By following individuals with evidence of such patterns, we have been able to amass enough evidence to support the idea that stress and how we react to it, plays an important, albeit controversial, role in the risk factor profile. We know from experience that many

patients, having learned the result of their angiography which indicates the need for heart surgery, undergo a change in their disposition. In this study we wanted to evaluate patients' personality profiles before angiography or heart surgery.

Methods

We endeavored to have a complete understanding of the personality traits of patients hospitalized in different wards of our center prior to their angiography. We selected 300 such patients, of whom only 210 chose to continue their cooperation to complete the following questionnaires: 1-SCL90 personality test, containing 90

questions and 9 personality indexes as follows:

Somatization=SO, Obsessive Compulsive=OB, Interpersonal=IN, Depression=DE, Anxiety=AN, Aggression=AG, Phobia=PH, Paranoia=PA, and Psychotism=PS.

This test has a Global Severity Index; GSI, on whose basis the data in this survey were analyzed. It is also noteworthy that the personality test and some of the following questions were completed in stage T1 before angiography and some other parts were completed in stage T2 before heart surgery.

2- A general knowledge and demographic questionnaire which is made up of 16 questions based on age, sex, marital status, etc.

3-A seven-item clinical-surgical questionnaire which is completed based on the history of the patient's disease.

Upon returning to the hospital for heart surgery between one to six months after angiography, the patients were re-evaluated by SCL90 test and the remainder of the questions on general knowledge and clinical-surgical questionnaires.

Results

The quantitative variables have been worked out as follows:

Of all the subjects (210 people), 71 (33.8%) and 139 (66.2%) were women and men, respectively, of whom, 12 (5.7%) had an average age of 15 to 25 years; 48 (22.9%), 25 to 45 years; 101(48.1%) 45 to 60 years and 49 (23.3%) over 60 years.

Seventy (33.3%) raised economic problems; 90 (42.9%) family problems, and 35 (16.7%) social problems.

Of the studied subjects, 125 (59.5%) had addiction to cigarettes; 82 (39%) to opium; 1 (0.5%) to heroin, and 11 (5.2%) to alcohol. All of them abused the above-mentioned stimulants either on their own or simultaneously with other stimulants.

Of all the subjects under study, 62 (29.5%) reported physical illnesses such as high blood pressure; 59 (28.1%) a history of high blood lipids; 36 (17.1%) a history of diabetes; 86 (42%) a history of heart attack; 28 (13.2%) a history of congenital heart disease; 28 (13.3%) a history of rheumatism; 17 (8.1%) a history of renal disorders, and finally 12 (5.7%) a history of peripheral vascular diseases either as an individual problem or together with other problems.

Of these subjects, 35 (16.7%) had been diagnosed with valvular heart diseases; 148 (70.4%) with coronary problems, and 27 (12.9%) with congenital diseases.

The average hospitalization time for heart surgery was 20.657 days with a range of 8 to 75 days.

The result of our research is in line with-Burker, Blumetal and Feldman³ who claimed that: the length of hospitalization of the patients depends on the coralition of the depression of them.

Using the SPSS program and the Paired Samplex Test, we assessed the questionnaire prior to heart surgery. The mean of GSI1 and GSI2 with (CI= 95%), (df=209), (std=0.3201) and (P=0.001) confirms our hypothesis (Table I).

Table I.

	Paired Diff.	Mean	SD	SE Mean	95% CI		T	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	GSI1 - GSI2	-.3488	.3201	2.209E-02	-.3923	-.3052	-15.791	209	.000

The overall average of samples was GSI2=1/7100 and GSI1=1/3612 (Table II). Therefore, the personality traits of patients are susceptible to change before angiography and heart surgery. But

according to the GSI standard, these changes are limited to the neurotic phase.

Table II.

		Mean	N	S.D.	Std. Error Mean
Pair 1	GSI1	1.3612	210	.2516	1.736E-02
	GSI2	1.7100	210	.3880	2.678E-02

Conclusion

We reached the conclusion that patients undergo psychological change after angiography, which results in psychosomatic symptoms, anxiety, and ultimately depression.

DE (Depression): The results of our research is in line with Pick, Molloy and Hinds⁴ who claimed that: most patients suffered depression before surgery, even though after operation the depression persisted in patients for some time.

SO (Somatization)=The results of our research is in line with Jenkins, Stanton and Jono⁵ and also researches by Johns and Doe⁶ who claimed that: most patients before and after heart surgery had psychosomatic symptoms such that if they hadn't undergone psychotherapy they would have become depressed.

AN (Anxiety): The results of our research is in line with Thomas, Fisher and Rose⁷ who claimed that: most patients after psychotherapy had less anxiety when they wanted to leave hospital.

Each of these symptoms can affect the patient's treatment course. Given the fact that such patients' personality indexes are prone to change upon the patients' learning of the necessity of heart surgery, we conclude that not only can the presence of psychiatrists and clinical psychologists in addition to that of cardiac interventionists and surgeons be useful but the employment of psychotherapy, psychoanalytic techniques, and education of patients can maximize the result of heart surgery as well.

We hope that hospitals' rehabilitation centers seek the help of psychologists as a supplementary treatment procedure and work as a team with an approach to physical, psychological and social factors of patients.

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