Psychiatric morbidity following myocardial infarction

M.S.I. MULLICK[1], MOMENUZZAMAN[2], M. SHAKHAWAT ISLAM[3], SAJAL BANERJEE[4]

Summary :

One hundred patients of myocardial infarction admitted to three urban teaching hospitals were studied to detect the prevalence of psychiatric morbidity following myocardial infarction. Using Self Reporting Questionnaire, 38 patients were found to have definite psychiatric morbidity. The psychiatric diagnoses were made by DSM-IV criteria. Twenty six cases were diagnosed as major depressive disorder 7 cases of anxiety disorder. Painic disorder and somatization disorder comprised 3 and 2 cases respectively. Previous history of psychiatric disorder was identified as a risk factor for Psychiatric morbidity after infarction. Except lower age incidence and higher type A behaviour in patients with psychiatric morbidity, no significant difference was found between patients with psychiatric morbidity and patients without psychiatric morbidity in terms of demographic variables. duration, types, risk factors, treatments and complications of myocardial infarction. The findings support the existence of high psychiatric morbidity in myocardial infarction.

Introduction :

Psychological disturbance is a common finding in myocardial infarction (MI). Several studies on psychiatric morbidity following infarction reported the frequency of psychological disturbance ranging from 40-80%[1-8]. In an earlier follow-up study, Wynn found 50% prevalence of depression in 400 patients with ischaemic heart disease (IHD)[2]. Wishnie et al[4] describing a series of 24 patients hospitalized for MI found that 88% of the patients rated themselves as anxious and/or depressed in the first month after discharge. Likewise. Cay and Colleauges[5] found a predominance of symptoms of anxiety and depression among 65% of their patients hospitalized for IHD and MI. In more than half of these patients, the symptoms were present before admission. Among patients with IHD, a psychiatric morbidity of nearly 45% has been reported with almost a 20% prevalence of depressive neurosis[6]. Using a standardized interview, Lloyd and Cowley[7] found

evidence of psychiatric illness in 35% of patients one week after MI. The wide range were due to several factors, including pattern of sample studied, time between infarct and assessment, and particularly the methods of assessment.

The emotional consequence of MI is reaction of the cardiac symptoms, subsequent events and is an integral part of the whole disease process. In most of the cases it is transient[2,7,8]. In contrast, syndromal psychiatric morbidity in MI is a distinct entity and persists for a long time[5,7,8]. Therefore, psychiatric problem is a significant source of morbidity and mortality in patients with MI and has a direct impact on the outcome of the disease3,4,7,9,10. The psychiatric treatment may have important prognostic implications. This study was aimed at finding the prevalence and types of psychiatric morbidity and to determine whether psychiatric morbity was related to any allied variables in comparison between patients with psychiatric morbidity and patients without psychiatric morbidity.

Materials and Methods :

The study was carried out in the Institute of Postgraduate Medicine & Research, National Institute of Cardiovascular Diseases and Dhaka Medical College Hospital of Dhaka City. A consecutive series of 100 admitted patients of first acute myocardial infarction from May 1995 to June 1996 were selected for the study. Patients older than 75 years of age, congnitive impairment, MI complicated with CVD were excluded. Diagnosis of MI was based on WHO criteria i.e. presence of any two of the three criteria e.g. typical clinical features, classical electrocardiographic (ECG) changes and supportive enzymatic evidences[11].

Subjects were interviewed at least 2 weeks after having first attack of MI by semistructured questionnaire after informed consent. The questionnaire consisted of sociodemographic

1. Assistant Professor of Psychiatry, Institute of Postgraduate Medicine and Research Dhaka.
2. Assistant Professor of Cardiology, Sher-e-Bangla Medical College Barisal
3. Senior Clinical Psychologist, National Institute of Mental Health, Dhaka.
4. Assistant Professor of Cardiology, Institute of Postgraduate Medicine and Research, Dhaka

parameters and relevant information about MI and psychiatric illness. Medical history, risk factors, clinical features with particular emphasis on complications, laboratory findings, treatment given and outcome were recorded. Type of MI was considered according to ECG findings. The risk factors were hypertension (if the diastolic blood pressure was presistently more than 95 mm Hg), diabetes mellitus (if blood sugar level 2 hours after 75 gm of glucose was more than 180 mg%), hypercholesterolaemia (fasting serum cholesterol level was more than 25mg%), family history of Ischaemic heart disease , smoking (if consuming for more than 3 months), consumption of contraceptive oral pills (if taken for more than 6 months) (if present in any of the first degree relatives) and type A behaviour (identified by diagnostic indicators of type A behaviour[12])

The 20-Item Self Reporting Questionnaire (SRQ-20)[13] was applied to each patient to detect psychiatric cases. This is a well validated screening questionnaire developed for use in developing countries in general medical settings. Where appropriate, à psychiatric diagnosis was assigned according to DSM-IV[14].

The collected data were processed and comparison was made between MI patients with psychiatric morbidity and without psychiatric morbidity. Statistical analysis involved two tailed t-tests and chi-square tests to interpret the data.

Results :

Among the 100 patients, 38 cases were found to be associated with psychiatric morbidity on the basis of SRQ-20. They were assigned psychiatric diagnoses according to DSM-IV. The sex distribution of these patients is shown in Table-I. It revealed that major

depressive disorder was the single largest category with 68.48% followed by anxiety disorder (18.4%). Panic disorder and somatization disorder were found in 7,9% and 5.3% respectively. Though male and female psychiatric cases were 24 and 25 respectively, the differences of distribution of psychiatric disorders between two sex groups were not significant .

The age range of our subjects was from 28 to 74 years with a mean of 49.20(SD=10.06) years. Majority of the patients were in age group of 46-55 years and 6 cases were aged below 35 years. Among the subjects 70 were male and 30 were female with a male - female ratio 1 : 0.45. Most of MI patients were literate and only 26 patients were illiterate. Of the 74 literates, 30 cases were educated from primary to secondary level and graduates were 18 cases. Only 7 cases were found postgraduates. Among the subjects, 30 were service holders, 21 were housewives, 16 were businessmen,12 were retired, 11 were cultivators, 4 were unemployed and the rest were of other occupations. Urban rural distribution were 63 and 37 cases respectively. Fifty seven cases were predominantly of middle income group and only 15 cases belonged to higher class. Eighty one cases were married, 11 were widowed and 6 were unmarried. Divorced and separated were 1 cases each.

Table-II shows the baseline characteristics of patients with psychiatric morbidity and patients without psychiatric morbidity. It revealed that mean age of patients with psychiatric morbidity was 45.7(SD=9.65) years and that for patients without psychiatric morbidity was 51.3 (SD=9.7) years. The difference was highly significant (t=4.02, df=98; p<0.001). Male-female ratio for patients with psychiatric morbidity was 1:0.65, not significantly

Table-I

Distribution of psychiatric diagnoses in patients with psychiatric morbidity (N = 38)

Diagonsis	Male		Female		Total	
	n=24	%	N=14	%	n=38	%
Major depressive disorder	17	70.8	9	64.3	26	68.4
Anxiety disorder	4	16.7	3	21.4	7	18.4
Panic disorder	3	12.5	0	0.0	3	7.9
Somatization disorder	0	0.0	2	14.3	2	5.3

Table-II

Characteristics of patients with psychiatric morbidity versus patients without psychiatric morbidity.

Characteristic	Patients with psychiatric morbidity (N = 38)	Patients without psychiartic morbidity (N = 62)	Significant
Age (year)	45.8 ±9.6	51.3±9.7	p< 0.001
Sex (Male : Female)	24.2	46 : 1.7	NS
Duration of MI	2.5 ±1.8	2.18 ± 1.6	NS
Types of MI			
Anterior	24(63.2%)	35(56.4%)	NS
Inferior	10(26.3%)	21(33.9%)	NS
Mixed anterior & inferior	4(10.5%)	6(9.7%)	NS
Risk factors			
Smoking	15(39.5%)	30(48.4%)	NS
Hypertension	17(44.7%)	28(45.2%)	NS
Diabetes Mellitus	10(26.3%)	20(32.3%)	NS
Hypercholesterolaemia	13(34.2%)	22(35.5%)	NS
Contraceptives	3(7.9%)	4(6.4%)	NS
Family history of MI	6(15.8%)	13(20.1%)	NS
Type A behaviour	6(15.8%)	2(3.2%)	P<0.01
Complications			
Arrhythmias	21(55.3%)	29(46.8%)	NS
Left ventricular failure	4(10.5%)	11(17.7%)	NS
Both ventricular failure	6(15.8%)	10(16.1%)	NS
Cardiogenic shock	1(2.6%)	2(3.2%)	NS
Conduction defects	4(10.5%)	7(11.3)	NS
Past history of depression	6(28.1%))	4(6.4%)	NS
Family history of depression	6(15.8%)	5(8.6%)	NS

different from that for patients without psychiatric morbidity which was 1:0.35. The two groups did not differ significantly in other demographic characteristics.

Duration of MI in majority of the cases were below one month. The mean duration of MI in patients with psychiatric morbidity was 2.5 (SD=1.8) months and 2.18 (SD=1.7) months in patients without psychiatric morbidity. The difference was not statistically significant (t=0.97, df=98, p>o.05). Majority of the patients had evidence of anterior MI. No significant differences of types of MI were found between two groups. Smoking and hypertension were two major risk factors with 45 cases for each. As smoking was found only in the male patients therefore it was the single largest risk factor (64.3%) among the male patients. Eight patients were found to have type A

behaviour and all were male. Consumption of oral contraceptive pills, a particular factor in women was observed in 7 cases. With the exception of type A behaviour there was no statistical difference of risk factor between patients with psychiatric morbidity and patients without psychiatric morbidity. Type A behaviour was 15.8% of the patients with psychiatric morbidity compared with 3.2% of the patients without psychiatric morbidity ($x2 = 8.3$, $df = 1$; $p < 0.01$). Analysis of medications of MI used in our subjects revealed no significant differences between two groups. Among the subjects, arrhythmias (50%) were the commonest complication. The differences of complications of MI between patients with and without psychiatric morbidity were not significant.

Among the subjects, past history of psychiatric disorders were found in 15 cases. Of these, 11 cases

had previous depressive disorder. Past history of psychiatric illness was significantly more common in patients with psychiatric morbidity than in patients without psychiatric morbidity (x^2 = 14.3, df = 1; p < 0.001). First degree family history of psychiatric illness was absent in most of the cases. Of the 11 cases of positive family history, 6 cases were found in patients with psychiatric morbidity and 4 cases belonged to patients without psychiatric morbidity. This higher incidence of positive family history of psychiatric illness among the patients with psychiatric morbidity just failed to reach the level of significance.

Among the 38 patients with psychiatric morbidity, 14 (36.8%) patients were receiving psychiatric medications.

Discussion :

Using 20-item Self Reporting Questionnaire, we found 38% of the MI patients had psychiatric morbidity. This result corresponds closely to the report of Lloyd and Cowley[7] where 35% prevalence of psychiatric morbidity was found one week after MI by using Standardized Psychiatric Interview. According to DSM-IV criteria of psychiatric diagnoses, major depressive disorder (26%) is the single largest illness encountered in the present study. The finding is also more or less consistent with the findings of several reports[4-6, 15-17].

With the exception of lower age incidence and higher incidence of type A behaviour in patients with psychiatric morbidity, none of demographic or medical parameters assessed, were significantly different between patients with psychiatric morbidity and patients without psychiatric morbidity. Thus psychiatric morbidity was not related to the medical status of patients. Our findings of these comparison between two groups were almost similar to the reports of Lloyd and Cowley[8].

In the present study, previous history of psychiatric disorders were significantly higher in patients with psychiatric morbidity than in patients without psychiatric morbidity which is consistent with the reports of Lloyd et al[7] and Carney et al[16], and could be identified as risk factors for psychiatric morbidity after MI.

Beacause of the predictive validity of the diagnostic criteria, appropriate treatment for psychiatric disorders in patients who meet DSM-IV criteria can be expected to be successful. It is likely that psychiatric disorders defined by this criteria will require and be responsive to psychiatric treatment in patients with MI. Psychiatric problems have direct negative impact in the outcome of cardiovascular disease which was reported in several studies[4,10,18]. Therefore, it would be especially desirable to treat psychiatric disorder in patients with preexisting MI.

Here, in this study 38.8% patients with psychiatric disorders were getting psychiatric medications. This indicates growing awareness about the existence of psychiatric disorders among the patients with MI.

Our findings suggests that among the patients with MI, syndromal psychiatric disorders need psychiatric treatment, leading to an overall reduction in morbidity.

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RELATIONSHIP OF SEXUAL DYSFUNCTION AND ANXIETY DISORDER
A H M M Rahman, A A Munib, M S I Mullick

RELATIONSHIP OF SEXUAL DYSFUNCTION AND ANXIETY DISORDER

A H M M RAHMAN[1], A A MUNIB[2], M S I MULLICK[3].

Summary

Fifty married men seeking help for sexual dysfunctions were interviewed for a period of three months to see the level of anxiety associated with dysfunction. Forty patients (80%) fulfilled the criteria for anxiety disorder. according to DSM III-R diagnostic criteria. Anxiety was manifested more in age group below 35 years with mean age 30. Manifestation of anxiety was found more in patients having pre and extramarital sex, homosexual experiences. masturbation habits associated with guilt feeling. Premature ejaculation is the most frequent (50%) sexual dysfunction. But patients having both premature ejaculation and erectile impotence manifested more anxiety.

Introduction

Sexual dysfunction either psychogenic or organic is a source of distress to men. Anxiety is the most important factor associated with onset of psychological dysfunction. From a questionnaire given to 100 normal couples in a prominent study in the USA, it is found that 50% of the males and 77% of the females reported atleast some dissatisfaction with their sexual life[1]. From a report on the experience of a sexual dysfunction clinic at Oxford, it is found of 289 presentations of the males. 53% had erectile impotence, 15% premature ejaculation, 7% ejaculatory impotence and 7% low libido[2]

'Sex-stress' immediate or remote may led to different psychosomatic response including sexual dysfunction[3] Most men have had erectile impotence on some occasion but anxiety and embarrassment, however, will make the episode significant to them[4]. Performance anxiety following initial erectile failure in most cases limit the capacity for sexual arousal thereafter[4]. Performance anxiety is the final common pathway of dysfunction may be induced by anxiety, fear, anger or guilt[5]. Some men do present with the erectile problems accompanied by premature ejaculations, more often they do not, and when they do, anxiety often reached such proportions that all effective functions have been impaired.

The prevalence of sexual dysfunction in Bangladesh is not exactly known. The present study was designed to find out the relationship between sexual dysfunction and anxiety disorder and the socio-demographic characteristics of the patients coming for help with dysfunctions. The different observations about the extent of anxiety in sexual dysfunction may ultimately be useful in management of these patients.

Materials and Methods

Fifty married men complaining of sexual dysfunction were interviewed during the period of October, 1989 to December, 1989 from a private chamber of a Venereologist in Dhaka city to see the level of anxiety associated with dysfunction. Only erectile problem and premature ejaculation were considered for the present study. A random selection of 30 male patients matched in age and education from Medical and ENT ward of the Institute of Postgraduate Medicine and Research were taken as control. All the patients were male and were above 18 years of age, came voluntarily for treatment. Patients with history of taking drugs, alcohol or heavy smoker for long time were excluded. Patients with diabetes were also not included. All patients were interviewed separately in privacy taking informed consent. A semi-structured questionnaire which includes all socio-demographic and relevant information associated with dysfunction used for the purpose. After collecting information about dysfunction, relevant questions were asked to elicit specific anxiety symptoms according to DSM III-R criteria for anxiety disorder[7]. The relevant data was represented in tabulation form and statistical analysis was done where needed.

Results

Fifty married sexual dysfunctional men between 22 and 50 years of ages with mean age of 33.2 years (SD±9.38) were included in the present study. The age distribution of these subjects with manifestation of anxiety is shown on the Table-I.

1. Department of Psychiatry, Dhaka Medical College, Dhaka.
2. Department of Psychiatry. Institute of Post-graduate Medicine and Research, Dhaka.
3. Institute of Mental Health and Research, Dhaka.

Table-I: *Age distribution of dysfunctional subjects with manifestation of anxiety.*

Age group	No.of subjects with dysfunction	No of Subjects manifested anxiety
21-25	2	2
26-30	21	18
31-35	12	10
36-40	7	4
41-45	4	3
46-50	4	3
Total	50	40

Mean age = 33.2 years (SD±9.38) 30.5 years (SD±12.3)

Twenty five patients complained of premature ejaculation, 22 both premature ejaculation and erectile dysfunction and 3 erectile dysfunction only (Table-II).

Table-II: *Patients with anxiety manifestation according to type of dysfunction.*

Type of dysfunction	No. of subjects manifested	No. of subjects manifested anxiety (%)
Erectile impotence	3	2 (66.67)
Premature ejaculation	25	20 (80)
Both	22	18 (81.82)

In 25 patients, dysfunction started few months to few years after marriage, in 16 patients it started immediately following marriage and in 9 patients sometimes before marriage. Forty patients (80%) with dysfunction fulfilled the criteria for anxiety disorder in DSM III-R, where as 16.67% in the control group are found to suffer from anxiety disorder (Table-III). The difference in presence o anxiety is highly significant (P<0.001).

Table- III: *Anxiety manifested in dysfunctional and control group*

Group	No.of subjects	No. of subjects manifested anxiety (%)
Dysfunctional	50	40 (80)
Control	30	5 (16.67)

X^2 =30.56, df=1,P<0.001.

Thirty six patients admitted premarital sex, 14 extramarital sex, 12 homosexuality and 43 masturbation habit for variable period. Majority of patients had no guilt feelings for their acts but those who admitted it manifested more anxiety (Table-IV).

Tabel-IV: *Dysfunctional subjects having guilt feelings about sexual experiences with manifestation of anxiety.*

Experiences	No.of subjects	Guilt feeling	Anxiety (%)	No guilt feelings	Anxiety (%)
Premarital sex	36	9	8(88.89)	27	20(74.07)
Extramarital sex	14	4	4(100)	10	9(90)
Homosexuality	12	6	6(100)	6	4(66.67)
Masturbation	43	16	15 (93.75)	27	21(77.78)

It was also found that patients who admitted masturbation habit manifested more anxiety (83.72%) with or without guilt feelings.

Discussion

Sexual dysfunction (erectile impotence and premature ejaculation) is common and overlooked problem in younger and middle aged men. In the present study anxiety was found to be more common in patients below 35 years of age with mean of 30.5 years (SD ±12.3) which is consistent with findings of other report[8]. Probably the people of younger age group are more concerned about their problem or they consider it more seriously.

Premature ejaculation was the most common sexual dysfunction (50%) appeared in the present study. Anxiety was manifested more by patients (81.82%) having erectile impotence accompanied by premature ejaculation. Martin Cole has observed that Premature ejaculation was more common than erectile impotence among asian patients. He also observed that anxiety is proportionately more in men who present with erectile problem accompanied by premature ejaculation[8].

Forty patients (40%) with dysfunction significantly manifested anxiety symptoms compared to that of control (16.67%), which is statistically highly significant (p>0.001). This signifies the importance of anxiety as a probable etiological factor in sexual dysfunction.

It is surprising to note that premarital sex, extramarital sex and homosexual expriencesd are quiet prevalent in our country and patients having such experiences with guilt feelings for their acts predispose to manifest more anxity.

Psychoanalytic theory, learning theory and theories of underlying sex therapy have all emphasized anxiety as an etiological factor for sexual dysfunction[9]. Fear of failure, performance anxiety, ignorance etc. may be etiologically important for dysfunction developing before or soon after marriage. On the other hand, marital conflicts, prolonged abstinence from any reason and other psycho-social factors may be etiologically important for dysfunctions developing sometimes after marriage.

Conclusion

From the present study it is evident that anxiety may be a cause and a factor in the maintenance of sexual dysfunction. Various interpersonal, intrapsychic or psychosocial factors have been identified to have possible linkage in the generation of anxiety with subsequent development of dysfunction. So anxiety reduction by encouragement of good verbal and sexual communication, correction of ignorance etc. may produce significantly good results in dysfunctional men.

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