PAPERS AND ORIGINALS

Psychiatric morbidity in men one week after first acute myocardial infarction

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Summary and conclusions

One week after a first myocardial infarction 35 out of 100 consecutive men patients aged under 65 were found by standardised clinical interview to have psychiatric morbidity. In 16 the morbidity had been evident before the infarct, and these patients showed a wider range of psychopathology than those whose symptoms had been precipitated by the infarct.

The results suggest that psychiatric morbidity in patients with heart disease is not necessarily a result of the disease process. Thus characterising psychiatric morbidity and identifying the patients' individual needs are important if rehabilitation is to be effective.

Introduction

The mental state of patients shortly after an acute myocardial infarction has been commented on ever since Herrick's classical delineation of the syndrome in 1912.¹ Herrick was impressed by the absence of psychological disturbance, but subsequent workers have usually reported definite psychopathology. Indeed, the emotional reaction to coronary heart disease has been claimed to be as predictable and characteristic as changes in the electrocardiogram or serum enzyme values.² Estimates of the incidence of psychiatric symptoms vary widely³⁻⁷ owing to differences in selection of patients, time between infarct and psychiatric assessment, and, above all, method of assessment. Questionnaires examine only selected aspects of mental state, whereas clinical interviews are more subjective. No measures are comprehensive, objective, and reliable, however, so that

interview by an experienced psychiatrist remains the preferred method of identifying psychiatric morbidity.⁸ We report findings based on a standardised, semi-structured interview⁹ of proved reliability when conducted by a trained psychiatrist.

Patients and methods

We studied a consecutive series of 100 men aged under 65 admitted to a coronary care unit after a first acute myocardial infarction. It was the practice in the unit to prescribe diazepam 2-10 mg thrice daily unless contraindicated: nearly all received this drug. Each patient was interviewed on the seventh day after admission, which had nearly always been on the day of infarction. By this time all but two patients had been transferred to a general ward; most were mobile and were soon to be discharged.

A full personal and medical history was recorded in a standardised way, and the mental state examined by means of a standardised psychiatric interview.⁹ This yields ratings on a five-point scale (three-point scale for "use of hypnotics") of the severity of each of 11 symptoms as experienced during the previous week and 12 abnormalities observed at interview. One symptom (fatigue) was omitted. A total score was obtained by doubling the scores for manifest abnormalities and adding them to the scores for symptoms; this corresponds best with the overall clinical impression.⁹ Where appropriate a psychiatric diagnosis was assigned according to the ICD (8th edition),¹⁰ being based on global clinical assessment together with the patient's history and symptoms and abnormalities elicited at interview. An overall rating of severity (0-4) was then made indicating no psychiatric morbidity (0), habitual trait or borderline morbidity (1), definite but moderate morbidity (2), marked morbidity (3), and severe morbidity (4). Finally, judgment was made on whether psychiatric morbidity had preceded or occurred after the infarct; this was based on the history supplemented by information from relatives, general practitioners, and hospital notes. It was influenced by the content of the complaints as well as temporal relations.

Physical severity of the illness was assessed by the Norris Coronary Prognostic Index¹¹ and a record made of patients who had required electrical defibrillation or temporary cardiac pacing.

Results

Altogether 105 patients were admitted to the series but five died in the first week. Of the remainder (aged 29-64 years; mean 54.0), 35

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proved to have moderate (27 cases), marked (7), or severe (1) psychiatric morbidity. Those with moderate morbidity had a mean total score of 16.6, and those with marked and severe morbidity a mean score of 25.3. Tables I and II give the mean item scores for reported symptoms and manifest abnormalities in the patients with and without psychiatric disorder.

TABLE I—Mean scores for reported symptoms obtained at standardised psychiatric interviews in patients with and without psychiatric morbidity

	Patients with psychiatric morbidity (n = 35)	Patients with no psychiatric morbidity (n = 65)
Somatic	0.31	0
Sleep disturbance	1.06	0.62
Use of hypnotics*	1.23	0.91
Irritability	0.46	0.26
Impaired concentration	0.69	0.34
Depression	1.63	0.11
Anxiety	1.69	0.42
Phobias	0.23	0.03
Obsessions	0.29	0.09
Depersonalisation	0.34	0.02

*Use of hypnotics rated on three-point scale.

TABLE II—Mean scores for observed abnormalities obtained at standardised psychiatric interview in patients with and without psychiatric morbidity

	Patients with psychiatric morbidity (n = 35)	Patients with no psychiatric morbidity (n = 65)
Slow	0.31	0.03
Suspicious	0.17	0.06
Histrionic	0	0
Depressed	1.57	0.08
Anxious	1.51	0.40
Elated	0	0
Flat	0.06	0
Delusions	0.26	0
Hallucinations	0	0
Intellectual impairment	0.11	0.05
Bodily concern	0.66	0.20
Depressed thoughts	0.66	0.03

Retrospective inquiries suggested that 16 patients (group 1) were psychiatrically ill at the time of their infarction, while in 19 (group 2) psychiatric morbidity was precipitated by the infarction. Table III lists the diagnoses in the two groups. Group 1 had a much wider range of psychiatric morbidity than group 2, four of the 16 patients having been receiving psychiatric treatment from their general practitioners at the time of infarction. Although several patients in both groups complained of impaired concentration, none was disorientated and there was no case of acute confusion.

TABLE III—Psychiatric diagnoses in patients whose morbidity preceded (group 1) or was precipitated by (group 2) myocardial infarction

Group 1 (n = 16)	Group 2 (n = 19)
Depressive neurosis 6	Depressive neurosis 12
Anxiety neurosis 4	Anxiety neurosis 6
Residual schizophrenia 2	Acute paranoid reaction 1
Personality disorder 2	
Phobic neurosis* 2	
Psychogenic impotence 1	
Borderline mental subnormality 1	

*Two patients were given primary diagnosis of anxiety neurosis and secondary diagnosis of phobic neurosis.

Previous episodes of diagnosed psychiatric illness were significantly more common in group 1 than group 2, and least in patients without psychiatric morbidity (group 3—table IV) ($\chi^2 = 24.02$; $P < 0.001$). There was no appreciable difference between the groups in mean Norris scores or in the need for defibrillation or cardiac pacing. Patients whose symptoms had been precipitated by the infarction tended to have higher mean Norris scores, but not significantly so.

TABLE IV—Previous psychiatric history, severity of infarction (mean Norris score), and need for defibrillation or cardiac pacing in the three groups

	Group 1 (n = 16)	Group 2 (n = 19)	Group 3 (n = 65)
Previous psychiatric history*	11 (68.8%)	5 (26.3%)	7 (10.8%)
Mean Norris score	4.87	6.09	4.99
Defibrillation or pacing	2 (12.5%)	3 (15.8%)	4 (6.2%)

* $\chi^2 = 24.02$; $P < 0.001$.

Discussion

Using a standardised clinical interview we found that 35% of patients had definite psychiatric morbidity one week after a first myocardial infarction. This incidence is lower than in studies employing different criteria.³⁻⁷ Maguire *et al.*¹² who used criteria similar to our own, reported psychiatric morbidity in 23% of a consecutive series of medical patients admitted with a wide variety of illnesses.

Our patients were divided into two groups according to whether their symptoms were precipitated by the infarction or present beforehand. In the former (group 2) the psychiatric disorder seemingly constituted a reaction to the cardiac symptoms and subsequent events and was an integral part of the whole disease process. In most cases it was transient; when the physical course was uncomplicated most patients had no appreciable psychiatric morbidity four months later, and their return to work had not been delayed by such symptoms. Detailed results of follow-up and factors predicting outcome will be reported separately.

In 16 cases the psychiatric disorder preceded the infarct. We cannot say whether this psychopathology had any aetiological importance or whether it helped to bring patients to medical attention, but we are confident that it was not due to the infarction. Earlier reports suggested that psychiatric symptoms in patients with heart disease must invariably be the result of the disease process, but our findings support more recent evidence that this is not so.^{6, 13}

The efficacy of rehabilitation of patients with heart disease is uncertain.¹⁴ For such programmes to be effective, patients with psychiatric morbidity must be identified so that intervention may be planned to suit individual needs. It is particularly important to characterise any psychiatric abnormalities that may have been present before infarction: management should not be based on the assumption that psychiatric morbidity is necessarily due to the cardiac disease.

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