

PERCEPTION OF DISTRESS BY PATIENTS OF MYOCARDIAL INFARCTION

NAROTTAM LAL¹
R.C. AHUJA²

SUMMARY

The study conducted on twenty five cases of first attack of M. I. with the aim to study the distress on the basis of quantification of accumulated distress score, revealed that M. I. patient had a high distress score. In addition no clustering of basis of mean number of events was observed which favoured a life long distress. M. I. patients also reported more number of events.

Introduction

Life changes preceding the onset of illness have been reported in the literature in case of psychosomatic diseases including many aspects of life events in relation to myocardial infarction (M. I.), which have been positively correlated with stress in number of studies (Theorell et al 1972; Rahe et al 1973, Johns 1973, Rahe et al 1974 and Lundberg et al 1975).

The fact, that individual's own perception, rather than only occurrence of the events would be more significant, has been emphasised in relation to M. I. (Johns, 1973) and hypertension (Lal et al 1982). Thus due weightage should be given to the individual's evaluation of happening in his life.

Myocardial infarction has been related with different aspects of stress precipitations in past in various countries and cultures (Rahe et al 1973, Rahe et al 1974, Theorall et al 1972, Lundberg et al 1975). The emphasis for coronary artery disease in recent past had been on lines of Type A and Type B behaviour pattern in relation to greater/lesser proneness to the disease. However handling of stress and mechanism precipitating the disease, in these personality behaviour is still controversial, and

opinion is that stress, both long term and immediate one, does play a role in predisposing the person for coronary artery disease. Emerging trend for emotional disorder is to quantify the distress for which number of scales and inventories have been developed. But quantified studies of distress in M. I. patients is difficult to be traced in Indian subjects.

Aim of the study

The present study was planned with the aim to study the distress on the basis of quantification of 'accumulated distress' (Venkoba Rao and Nammalvar 1976) score in patients of first attack of acute myocardial infarction who met the electrocardiographic (E.C.G) criteria of diagnosis.

Material and Methods

The methodology followed in two earlier published reports i.e. hypertension (Lal et al 1982) and obsessive compulsive disorder (Lal et al 1986) has been utilised in this study also for evaluation of life events and calculating the distress score.

Twenty five, new, consecutive E.C.G. diagnosed cases of first attack of myocardial infarction under the care of one of us (RCA), formed the Index cases for

1. Reader, Department of Psychiatry, K. G.'s Medical College, Lucknow.

2. Reader, Department of Medicine, K. G.'s Medical College, Lucknow.

evaluation. In addition these cases met the diagnostic criteria of acute M.I. and was evaluated for the diagnosis of M. I. by one of us (RCA). Equal number of male control subjects were derived amongst the relatives of hospitalised psychiatric patients. Control were non-psychiatric, evaluated on Cornell Medical Index and clinically, and were free from chronic or acute physical disease. They were matched one to one for age and 'group matched' for economic status and education. Cases of only first attack of M. I. have been included to make the experimental population a homogenous one. These cases were evaluated 1 to 2 months after the discharge from the hospital on a preappointed followup visit when, cases had fairly recovered. Informed consent was obtained from each patient and control.

The life event inventory used in this study was developed by Tenant and Andrews (1976) and has been used in modified form by Venkoba Rao and Nammalvar (1976) in depressive patients and by Lal et al (1982 and 1986) in hypertensive and O.C.D. patients. Life events inventory which was translated in Hindi by translation-retranslation technique, the local language, consists of 67 events. Each event was written on a separate card. The cards were read by the subjects who were required to select those events which the subjects now considers, were emotionally significant and or had significant effect on the patient's emotion. Only those events occurring till the attack of acute M. I. in patient (and up to the corresponding age in the controls) were considered.

Subsequently, the subject was asked to read the selected card again to determine the age at which the event occurred and type of psychological effect produced in terms of distress and happiness. Finally, the subject was asked to rate the intensity of emotion experienced for each event. Five points scale (1-5) measuring the degree of

distress or happiness induced by each event was used. Distress rating score was obtained by assigning positive sign to distress events and negative sign to happy events and adding them together to determine the over all score.

Results

The mean distress score was 5.6 (s.d. 6.3) for cardiac patients and 4.9 (s.d. 4.9) for the control group. Thus the cardiac patients perceived and reported significantly higher amount of distress than controls ($p < 0.05$). Similarly mean frequency of reported events was 9.9 (s.d. 4.0) for the cardiac patients and 6.3 (s.d. 4.8) for control i.e. cardiac patients subjectively felt more number of events than their control counterparts ($p < 0.01$). The data was also analysed for mean number of two type of events (i.e. events evoking 'happy' responses and events evoking 'distress' responses) separately. While there was no significant difference statistically for the mean number of events evoking happy responses, between cardiac patients and controls (Mean 4.7, s.d. 1.5 for cardiac group; Mean 4.0; s.d. 1.7 for control group), the number of events evoking 'distress' feeling differed significantly (cardiac group: Mean 5.2; s.d. 3.8; control group: Mean 2.3; s.d. 3.6; $p < 0.01$). The analysis of the data for the mean number of events in relation to onset of sickness revealed that there had not been precipitation as a result of clustering of event within two years of onset. The mean number of events over the period of two years had been significantly more than their control counterpart ($p < 0.01$).

Discussion

Only a small minority of events and life changes (out of a very large number) experienced by an individual in daily life are so emotionally charged that they could effect the emotional and physical life of the person (Lal et al 1986). These, important

events are unlikely to be forgotten (Roy Byrne et al 1986) even with passage of time. Long term emotional perception produced by accumulated distress over the period of life as hypothesised earlier (Lal et al 1982 and Lal et al 1986) are likely to effect the predisposition of the disease in a vulnerable person. It is possible that a subject has experienced less number of distress evoking events but the total distress produced over the period in him had been higher, because of greater severity of distress evoking events or less number and/or severity of happy events.

fect of his personality pattern is matter for debate and investigation. The effect of such events in form of clustering is not evident, because the mean number of events over 2 years before onset of sickness is significantly higher in controls. No such difference is evident for the period less than two years.

The distress score worked out reveals that M.I. patients had suffered more distress event over the period in their life.

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Table 1
Distress score, frequency and nature of events

Variable	M.I. Patients (N = 25)		Control (N = 25)		Significance		
	Mean	s.d.	Mean	s.d.	t	d.f.	P
A. Distress Score	5.6	6.3	2.0	4.9	2.21	48	< .05
B. Frequency of Events	9.9	4.0	6.3	4.8	2.58	48	< .01
C. Nature of Events Evoking							
Happiness	4.7	1.5	4.0	1.7	1.51	48	N.S.
Distress	5.2	3.8	2.3	3.6	2.72	48	< .05

Table 2
Duration distribution of events

Time of occurrence of events before M.I. attack	Happiness evoking events					Distress evoking events				
	M.I. (N=25)	Control (N=25)	t	Significance d.f.	p	M.I. (N=25)	Control (N=25)	t	Significance d.f.	p
Upto one year:										
Mean	0.7	0.5	0.92	48	N.S.	0.9	0.2	1.94	48	N.S.
s.d.	0.7	0.8				1.2	1.3			
Above one year:										
Mean	4.0	3.6	1.20	48	N.S.	4.3	2.0	2.65	48	< 0.05
s.d.	1.1	1.2				3.2	2.8			

The present work, goes to confirm the widely held belief that M.I. patients usually undergo more distressful and anxiety provoking life situations, which is cause or

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