

PSYCHOLOGICAL ASPECTS OF HAEMATOLOGICAL MALIGNANCIES

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SUMMARY

Sixty nine patients with various types of haematological malignancies were studied. Chronic myeloid leukaemia (n=32) was the commonest diagnosis. The patients were assessed on Hamilton Rating Scale for Depression, PGI-N₂ Health Questionnaire and Presumptive Stressful Life Events Scale and those who had scores above the cut off points for Hamilton Rating Scale and/or PGI-N₂ Health Questionnaire were assessed on Present State Examination. The patients were followed up at 3 and 6 months interval. At 3 months 51 patients were re-assessed whilst at 6 months only 26 could be re-evaluated. There were no significant changes in scores of Hamilton Rating scale and PGI-N₂ Health Questionnaire at intake and subsequent follow-up assessments. No significant correlations between stressful life experience and severity of illness emerged. Twenty nine patients were interviewed on Present State Examination and of these 20 had diagnosable depressive neuroses. From consultation liaison psychiatric point of view, provision of psychiatric help to these patients is discussed.

According to Mettler and Mettler (1947), the notion of a link between psychological factors and cancer has ancient origins. In recent years it has been shown that appearance of cancer is often preceded by emotional factors (Miller and Jones, 1948; Greene and Miller, 1958; Feshan, 1959; Bahnsen, 1969 and Greene and Swisher, 1969). The relationship between stressful life experiences, depression and personality factors as psychological antecedents of cancer have yielded contradictory results with some authors findings evidence for and some against such associations (Bahnsen, 1980 and Greer, 1983, 1985).

Another question which has attracted the attention of researchers is whether psychological factors influence the course of cancer. It is well recognized that endocrine and immune functions are considerably affected by psychological stimuli and thus it is probable that through

these mechanisms, psychological processes may influence the course of cancer (Devitt, 1979 and Stoll, 1979).

Psychological aspects of breast cancer (Muslin et al., 1966 and Greer and Morris 1975 and Schonfield, 1975), lung cancer (Grissom et al., 1975 and Horne and Picard, 1979), cancer of the cervix (Schamale and Iker, 1966 and Kulhara et al., 1988) and cancer of gastrointestinal system (Fras et al., 1967 and Jacobsson and Ottosson, 1971) have been reported. However, though haematological malignancies are common and would appear to have psychologically devastating effect on afflicted individuals, systematic psychological studies of these cancer patients are practically non-existent. Therefore, we felt the need to carry out this investigation. The study had a prospective design and we have attempted to study the psychological aspects of haematological malignancies, using well known asse-

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ssment tools. Attempt has also been made to study the relationship between stressful life events and progression of malignancy.

Material and Methods

The study was conducted at the Departments of Internal Medicine and Psychiatry of the PGIMER, Chandigarh. The study had a prospective design.

Adult patients with diagnosis of haematological malignancy in the age range was from 18 to 50 years were included in the study. Patients who had significant pre-existing psychiatric illness or epilepsy were excluded.

Patients included in the study were subjected to psychological assessments using the following :

- a : Hamilton Rating Scale for Depression-HRSD (Hamilton, 1960).
- b : PGI-N₂ Health Questionnaire-PGI-N₂ (Verma, 1978)
- c : Presumptive Stressful Life Events Scale (Singh *et al.*, 1984)

Patients who scored 17 or more on HRSD or 9 or more on PGI-N₂ were subjected to structured psychiatric interview employing the 9th version of the Present State Examination-PSE (Wing *et al.*, 1974). PSE interview were conducted by the principal investigator.

The patients were followed up in the Leukaemia Clinic of the Institute by 2 investigators (S. C. V. and P. B.) and their clinical condition was monitored. Psychological assessments on HRSD and PGI-N₂ were repeated at 3 and 6 months. PSE interviews were also repeated as and when necessary.

For comparison of means 't' test was used. Product Moment Co-efficient of correlation was employed to study relationship between stressful life events and severity of illness.

Results

Sixty nine patients with diagnosed haematological malignancies of various types entered the study. The entire study cohort was relatively young in age (mean 32.86, S. D. 9.99 years). Nearly 77% of the patients were males and about 74% of the patients were married. Fifty four percent of the patients came from rural area and about 54% of them belonged to nuclear families.

As regards haematological diagnoses, chronic myeloid leukaemia was the commonest condition (32) followed by acute leukaemia (18), non-Hodgkin's lymphoma (9), Hodgkin's disease (7) and chronic lymphatic leukaemia (3).

Twenty five patients had been ill for 6 months, 13 had duration of illness of upto one year and 31 had been ill for more than 1 year.

Of the 69 patients included in the study, 51 were available for assessment at 3 months, 3 had died and the remaining 15 had dropped out of follow-up. At the end of 6 months, 26 patients were still attending the clinic and 7 more patients were reported to have died. No information was available about the rest.

The data about the severity of illness at intake and the progression of the disease over the period of follow-up are shown in Table-1. At the time of intake, 31 patients were found to have clinically active disease, 18 were thought to be improving and in 20 patients the disease process was evaluated to be "controlled". At 3 months follow-up (54), 5 patients were reported to have active disease, 11 were improving, 35 were placed in "controlled" category and 3 patients had died. At 6 months follow-up (33), 4 patients were still in the active phase of the disease, 7 were reported to be improving and 15 patients were described to be in "controlled" category. Seven more patients were found to have died between the first and the second

TABLE I—Severity of illness and its progress*

Severity of illness	At intake (n=69)	At 3 months (n=54)	At 6 months (n=33)
Active	31 (44.92)	5 (9.25)	4 (12.12)
Improving	18 (26.08)	11 (20.37)	7 (21.21)
Controlled	20 (28.98)	35 (64.81)	15 (45.45)
Dead	—	3 (5.55)	7 (21.21)

*Percentages in parenthesis.

follow-up.

At the time of intake, the mean PGI-N₂ score for the entire patient sample was 8.04 ± 6.78 . The mean score for all patient on HRSD was 9.46 ± 6.71 .

Of the 69 patients who entered the project, 51 were assessed at 3 months interval again. At the time of intake, these 51 patients had a mean of 7.92 ± 7.09 on PGI-N₂ which rose to 8.39 ± 9.23 at 3 months follow-up. This increase in PGI-N₂ score, however, was not statistically significant ($t=0.37$; d.f.=50; $p>0.05$). Similarly, for these 51 patients, the mean HRSD score at intake was 8.86 ± 6.65 which dropped to a mean value of 8.27 ± 6.92 which too was not statistically significant ($t=0.57$; d.f.=50; $p>0.05$). These results are shown in Table-II.

TABLE 2—Scores on PGI-N₂ and HRSD for patients followed for 3 months (N=51)*

Variable	At intake (Mean \pm SD)	At 3 months (Mean \pm SD)
PGI-N ₂	7.92 ± 7.09 $t=0.38$, d. f. = 50, N. S.	8.39 ± 9.28
HRSD	8.86 ± 6.65 $t=0.58$, d. f. = 50, N. S.	8.27 ± 6.92

Twenty six patients were reassessed at the end of 6 months. The mean PGI-N₂ score at intake, at 3 months and at 6

months follow-up of these 26 patients were 8.07 ± 6.76 , 6.46 ± 5.57 and 6.73 ± 7.14 respectively. Comparisons between intake and 3 months follow-up ($t=1.18$; d.f.=25; $p>0.05$), between intake and 6 months follow up ($t=0.87$; d.f.=25; $p>0.05$) did not achieve statistical significance. Similar was the case for comparisons of mean HRSD scores between intake and 3 months or intake and 6 months follow-ups. These results are shown in Table-III.

Stressful life events were studied for the entire cohort at the time of intake. Mean number of life events experienced was 3.58 ± 2.16 and the mean stress score was 148.85 ± 94.06 .

By employing Product Moment Coefficient of Correlation, an attempt was made to study the strength of association between severity of illness at intake with scores on PGI-N₂, HRSD and Presumptive Stressful Life Events Scale of Singh et al. (1984). Similar correlations were sought between severity of illness at follow-ups and scores on these psychiatric assessments for patients who were available for follow-up.

At intake, no statistically significant correlations were observed between the severity of illness and scores on PGI-N₂ and HRSD. Similarly, the number of life events that the patients had experienced as well as the stress score did not

TABLE III—Scores on HRSD and PGI-N₂ for patients followed for 6 months (n=26)*

Variable	At intake	At 3 months	At 6 months	t*			p
	(Mean±SD)	(Mean±SD)	(Mean±SD)	av _a b	bv _a c	av _b c	
	(a)	(b)	(c)				
PGI-N ₂	8.07±6.76	6.46±6.57	6.73±7.14	1.18	0.23	0.87	NS
HRSD	8.69±7.19	6.11±4.45	7.5 ±6.83	2.04	0.98	0.63	NS

*Paired 't' test; d.f.=25.

achieve significant correlations were obtained between intake scores on PGI-N₂, HRSD or life events scores and severity of illness at follow-up.

The relationship between scores on psychological tests and type of haematological malignancy was also explored. For this the entire sample was divided into 3 subtypes—chronic leukaemia (35), acute leukaemia (18) and lymphoma (16). Comparison between these subtypes and psychological assessments did not reveal statistically significant differences except that acute leukaemics as a group were significantly more depressed than lymphoma patients (acute leukaemia group mean HRSD score 12.27 ± 7.30 ; lymphoma group mean HRSD score 7.0 ± 6.0); $t=2.30$, d.f.=32, $p<0.05$).

Using the screening criteria of PGI-N₂ score of 9 or more or HRSD score of 17 or more for subjecting the patients to psychiatric interview on PSE (Wing *et al.*, 1974), 29 patients were thus identified and clinically interviewed on PSE at intake.

Of the 29 patients interviewed on PSE, 20 were found to have clinically diagnosable depressive neurosis on the basis of PSE syndromes. Thus the rate of psychiatric morbidity in this group was found to be high i. e. 28.98% of the total sample. However, except in 3 cases, the depressive reaction was short lasting and responded very favourably to antidepressant therapy. Three patients continued

to be in depression for nearly 3 months. Some PSE symptoms like tiredness and exhaustion, loss of weight due to poor appetite and subjective anergia and retardation were not rated as present due to concurrent physical illness. Depressed mood was the most common symptom and anxiety was seen in 9 patients. All patients had "neurotic" symptoms, none had "psychotic" symptoms (Table-IV).

TABLE IV—PSE symptoms in patients (n=69)

Symptom	Present in cases	Percentage of total
1. Depressed mood	20	28.98
2. Loss of interest	20	28.98
3. Poor concentration	19	27.53
4. Worrying	17	24.63
5. Observed depressed mood	16	23.18
6. Hopelessness	14	20.28
7. Loss of libido	13	18.84
8. Slowness and under activity		17.39
9. Tension pain	11	15.94
10. Restlessness	10	14.49
11. Free floating anxiety	9	13.04
12. Subjective inefficient thinking	8	11.59
13. Social withdrawal	7	10.14

Discussion

Though this study had a prospective design and employed well known instru-

ments of assessment, it has certain limitations. The major drawback of the study is substantial proportion of dropouts which may raise doubts regarding the results and inferences.

The study cohort did not display appreciable variation and fluctuation in affective and neuroticism state over the follow-up period. However, a huge chunk of patients (28.98%) had depressive symptomatology and diagnosable depressive neurosis. Depressive phenomena in the patients were transient and responded favourably to psychopharmacology and supportive psychotherapy. Since there is a lack of published material about psychological symptoms in leukaemic patients, it is not possible to compare our results.

The existence of depressive psychopathology, its transient nature and effectiveness of psychotherapeutic intervention in patients with various form of haematological malignancies argues very cogently in favour of beneficial effects of close ties between the oncologists and mental health professionals. This also underscores the need of consultation liaison psychiatry in such disorders.

If patient care is to be comprehensive, it cannot be denied that in the management of malignancies in general and haematological malignancies in particular, the treating physicians should work hand in hand with psychiatrists. This will minimize psychological trauma to the patients with resultant positive impact on the course and prognosis of haematological malignancies.

Acknowledgement

The study was supported by financial assistance from the research fund of Post-graduate of Medical Education and Research, Chandigarh for which the authors are grateful.

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