DEPRESSIVE ILLNESS IN INDIA

A. VENKOBARAO, M.D., Ph.D., D.Sc., D.P.M., F.A.M.S., F.A.Sc., F.R.C. Psychiat., F.A.P.A., M.R.A.C.P.

General Introduction:

"Melancholia is one of the great words of Psychiatry. Suffering many mutations, at one time the guardian of outworn schemes of errant theories, presently misused, cavilled at, dispossessed, it has endured into our own times, as part of medical terminology no less than of common sense" (Lewis, 1931). A disease of antiquity, depression is an illness with a long ancestry. As in other instances, depressive illness figures fairly prominently in the sacred writings of India, her mythologies, literature the twin epics Ramayana and Mahabharata and her folklore and ancient medical monographs and compendia.

The hero of Ramayana, Rama suffers from the first episode in his fifteenth year; his 'once radiant body became all at once emaciated, like the river floods going down in summer; his red cool face with long eyes became wan like a white lotus; and he ever seated himself in the padma posture with his hands resting on his chin and his young feet tinkling with bells. Then wholly absorbed in pensive thought, he forgot to perform daily allotted duties of life and his mind grew despondent. His followers ... fell at his feet and asked him of the cause of his moody temper to which Rama merely replied by performing his daily duties with such a depressed mind and a dejected face as affected all who saw it.' The poet's description at once reveals such characteristics of the malady as known to the modern psychiatrists: psychomotor retardation, withdrawal, emaciation, depressed facies, and importantly the infectious quality of the mood. A non-reactive or endogenous nature of the disease was implied when the royal priest Vasishta explained that 'the great delusion that has now arisen in him is unlike any that springs from disappointment as of any desired object or out of a great accident.' Rama expresses suicidal ideas and threats in the epic story. His earthly manifestation terminates by voluntary drowning in the River Sarayu. Rama's father suffers thrice from melancholia and the third attack proves fatal. He dies of grief. Rama's grand father King Aja was a victim of the similar illness for several years following the death of his wife and he starved himself to death. This again highlights the thorough accepted fact of the heritability of melancholia and of suicide and death from acute depression. The epic itself is replete with instances of suicidal expression and threats from its other characters from such emotional states like grief from loss of love object, altruistic upholding of varieties and values, anger, hopelessness and helplessness, of brotherly love and so on.

Depression striking Arjuna in the Mahabharata epic in anticipation of the destruction and killings in the battle of Kurukshetra was relieved by Lord Krishna's admonition and counselling in Gita, India's scriptural masterpiece. Krishna precisely performed a restructuring of what William James called, "Divided Self" and reintegration of

1. Sandoz Foundation Lecture delivered on 4th July 1984 in the Department of Psychiatry, Royal Edinburgh Hospital, Morningside Park, Edinburgh, Scotland.
2. Professor and Head, Institute of Psychiatry, Madurai Medical College and Government Rajaji Hospital, Madurai-625 020.
Arjuna’s “soul’s schism” to use Arnold Toynbee's words.

Ayurveda, the science of medicine, contemporaneous with Vedic India upheld the hypothesis that the health of an individual depended upon the state of equilibrium of bodily and mental humors. The disease resulted from disequilibratory states of humors called Dhoshas. Collectively called ‘unmad’ insanities resulted from the disorders of these doshas.

This is not unlike the view of Hippocrates who saw melancholy as an expression of imbalance of humors, excess of black bile and alteration of brain moisture. Kaphonmad and Tridoshanmad in Ayurveda correspond to the endogenous variety and ‘fore-father’s constellation disease’ (Pitur Graha vyadhi) to the exogenous type. Ancient treatments were not without techniques of shock like a mock announcement of death penalty; giving false information of the death of a friend or a close relation; threats by non-poisonous snakes; terrorising by trained elephants and lions, and by men dressed as bandits.

Frequency: Though christened ‘English Spleen’ two hundred years ago, by George Cheyne and suspected by him to be confined to the inhabitants of the British Isles, it is now clear that it is world-wide in its spread. It is seen in people of all lands and every culture, affecting both the sexes, sparing neither the high or the low, tormenting all ages, forcing the exit of some in my culture and many in others through self-destruction and steadfastly maintaining its core clinical features down the centuries. Beck (1967) was right when he said that there has been a consistency in the core symptoms of depression since ancient times.

Earlier notions of the uncommonness of depression in India were advanced by some excellent British Psychiatrists appointed to the mental asylums in the country. Much water has since flown down the Ganges and these have now been improved upon and revised by a good sprinkling of publications addressed to the epidemiology of mental morbidity in India in general in the last two decades. Some have been directed to the occurrence of depression itself. The data over its occurrence at all levels of clinical encounters experience-Mental hospitals, General hospital Psychiatric clinics, General Medical practice and in the community are now available. The last twenty-five years can easily be described as a landmark in the history of psychiatry in India and largely contributed to by the growth and development of General hospital Psychiatry. The prevalence of the illness in the general population in different parts of the country is offered in the Table-I (Venkoba Rao, 1984).

The figures vary from 1.5 to 32.9 per 1000 population. The prevalence in outdoor and indoor sections of the Departments of General hospitals in the country is offered in Table-II (Venkoba Rao, 1984). From the reports it is evident that the occurrence of the disorder is four to five times more in the northern and eastern India than the western and southern areas. A collaborative study sponsored by W.H.O. between Chandigarh in the North and Madurai in the South confirmed a lower occurrence of the illness in Madurai. Both studies were carried out in the Psychiatric departments of General teaching hospitals (Wig and Venkoba Rao, unpublished). To sum up the prevalence reports The prevalence of depression in general hospital psychiatric clinics varies from 6%—30% and in the field studies 16-30/1000 population and 5%—25% in general medical practice. Urban depression is reported to be commoner than the rural type. The picture of rural depression is no different from that of urban type. It has
## Table I. Prevalence of depressive disorders (in India) in general population

| Author                  | Centre          | Population          | Number | Rate/1000  |
|------------------------|-----------------|---------------------|--------|------------|
|                         |                 |                     |        | Depression |
|                         |                 |                     |        | Affective Psychosis |
| Dube (1970)            | Agra (Urban & Rural) | 29,468               | 1.26   |            |
| Sethi et al (1972)     | Lucknow (Rural) | 2,691               |        | 1.5        |
| Sethi et al (1974)     | Lucknow (Urban) | 4,481               | 7.9    | 8.9        |
| Verghese et al (1975)  | Vellore (Urban) | 1,887               | 3.1    | 32.9       |
| Nandi et al (1973)     | West Bengal (Rural) | 1,060               | 37.74  | 4.72       |
| Carstairs and Kapur (1975) | South India (Rural) | 1,233               |        | 30.0       |
| Venkoba Rao and Madhavan (1982) | Madurai (Geriatric Semi Urban) | 696 |        | 60.0       |

## Table II. Prevalence of depressive disorders in psychiatric out-patients and in-patients of General Hospitals in India

| Author                  | Year | Place          | Percentage |
|------------------------|------|----------------|------------|
| Dutta Ray              | 1962 | Delhi          | 1.85*      |
| Neki and Kapoor        | 1963 | Amritsar       | 7.6*       |
| Satyavathi and Sunderaj| 1964 | Bangalore      | 4.9        |
| Davis et al            | 1965 | Ranchi         | 14.0       |
| Venkoba Rao, A.        | 1966 | Madurai        | 6.0        |
| Wig et al              | 1969 | Chandigarh     | 21.7       |
| Teja et al             | 1971 | Delhi          | 8.7        |
| Sethi and Gupta        | 1972 | Lucknow        | 34.7       |
| Marfatia               | 1972 | Bombay         | 19.75      |
| Bagadia et al          | 1973 | Bombay         | 8.7        |
| Vahia et al            | 1974 | Bombay         | 7.6*       |
| Khamo et al            | 1974 | Chandigarh     | 16.8*      |
| Venkoba Rao, A.        | 1976 | Madurai        | 12.0       |
| Venkoba Rao, A.        | 1981 | Madurai        | 9.12 (OP)  | 15 (IP)    |

(*Affective Psychosis)
been diagnosed among some tribals in certain parts of India. Nandi’s observation in 1977 that ‘inspite of the unmistakable cultural differences between a brahmin and a tribal, the picture of a psychotic brahmin was not different from a psychotic tribal’ appear to confirm Edgerton’s observation a decade earlier: “What is psychotic for them is psychotic for us” (Edgerton, 1966; Nandi et al 1977). This is in keeping with the data of Field (1960) in Northern Ghana and Leighton et al (1963) in the Yorubas.

Symptomatology:

The general symptomatology of depressive illness in India is usually summarised as follows: (1) Rarity of depressed expressed mood; (2) A higher frequency of agitation than retardation; (3) A predominance of hypochondriacal and paranoid features; (4) A significant presence of somatic symptoms; (5) Infrequency of ideas of sin or guilt; (6) Occasional occurrence of obsessional symptoms and (7) Smaller number of completed suicides though suicidal ideation and attempts do occur (Venkoba Rao, 1970). If there is a poetic quality in the sense of a richness, floridness, strangeness and the grotesque in the Bleuler’s disease, the depressive constellation is prosaic and offers less colourful pageantry of symptoms. There is a monotonous repetition of few core symptoms with a note of depressed mood excepting in those whose symptoms are exclusively somatic. I would like to restrict myself to a discussion of a few of them especially the depressive affect, guilt and depression and suicide behaviour in the depressed.

Depressive affect: Depressed mood by itself as the principal propeller for psychiatric consultation is an uncommon symptom. Nevertheless such a mood is subjectively experienced invariably and with an appropriate interrogation and enquiry one never fails to elicit this. It will not be wrong to say that a sad mood is often an elicited sign rather than a symptom of complaint. In my clinical experience I have noted that it is the type of interrogation that determines the admission of subjective experience on the part of the patient. It is like unearthing suicidal ideas in the depressed persons. Many come forward with such statements like: “there is joylessness” “there is a sensation of sankatam” “there is no interest or desire for things.” It becomes obvious when a rapport is possible and elsewhere I have termed it as a ‘reversed praecox feeling’ (opposite of praecox feeling of Runke) a homely feeling that at once brings the examiner and the patient on the identical emotional wavelength. The patient quickly realises that the doctor has put his finger right on his problems unlike many others whom he had consulted earlier. Not being a leading complaint by the sufferers, and an incomplete psychiatric status examination in a language unfamiliar with the patients a lack of an effective communication had contributed to an erroneous impression that the depressed mood is uncommon in Indian patients and other non-western cultures. For one trained in one’s own culture and by those familiar with the patients’ culture, a way of communication in terms of the nuances of depressed mood it becomes evident that the mood of sadness in oriental depressives is no less frequent than in the western co-sufferers.

It is not unusual to hear statements like: “I do not wish even my worst enemy to be a victim of this disease” implying the tormenting nature of the mood. Depressed mood as a pathology is universal and overcomes transcultural barrier. However, patients from a higher socio-economic status and others who have a smattering of the symptom from
lay publications do express such an emotion spontaneously. It is to be taken care that many a time in them they do not indicate depression which we understand. After the first one or two consultations, the patients become familiar with the expression of their feeling state.

**Guilt:** Despondency and ideas of guilt are by tradition considered sibling symptoms of a common depressive mood parentage. This assumption turns tenuous when one looks at non-western depressives. This is not to deny the occurrence of guilt as a symptom in our patients but only to highlight their lower incidence. In my earlier series guilt was observed in 26.7% of cases (Venkoba Rao, 1973). However, in a study of a comparison of Indian data from Madurai and Chandigarh with two British reports, Teja et al (1971) concluded that though the frequency of guilt was common in the Indian as well as the British subjects the quality of guilt differed. A study was reported from Madurai over the occurrence of Karmic guilt. Attribution of one's illness to karmic deeds of past lives seldom generates guilt but on the other hand serves to relieve it. It acts as a rationalisation and leads to acceptance of reality. This needs clarification.

**Suicidal behaviour:** The national suicide rate for India is around 10 per 100,000. Mental illness contribute to not more than 20-30% and depression to still less. Our own experience has indicated that completed suicide in depressives is far less than reported in Western literature. In a follow-up study from Madurai of 122 depressed patients for a period of over 5-13 years, there was only one case of completed suicide (Venkoba Rao and Nammalvar, 1977). However, suicidal ideas occurred in 48 patients and suicide attempts were made by 23 in the series.

A series of fifty endogenous depression cases was studied by us (Venkoba Rao and Nammalvar, 1979) with a view to study the type of death orientation in them and suicide counters. The death oriented thinking was classified into four types: Wish to die, wish to kill oneself, wish to be killed and unclassifiable. All fifty patients had some type of death oriented thinking: 68% expressed to kill themselves (direct or active orientation); 14% had a wish to die and 8% wished to be killed and 10% fell under unclassifiable orientation. The relation of symptom profile and death orientation has also been studied. A high relationship between somatic symptoms and the wish to kill oneself was evident confirming the findings in the literature. The “wish to be killed” is interesting in those it refers to the masochistic frame or mind—characteristic of depression. It indicates an intrapunitiveness and ideas of guilt over commissions and omissions of bygone days. Considering that only 8% of the series had this type of death orientation, it may be concluded indirectly that ideas of guilt and sin were not of much magnitude in the depressives.

An important area that needs exploration is the non-consummation of suicide notwithstanding suicide ideas. We have in the literature classification of non-suicidal and suicidal depressive. We have observed what we have termed as ‘suicide counters’ which operate against the suicidogenic ideas and impulses. Schneidman (1976) remarked that the same environment offers both suicidogenic as well as those that run against it. The types of suicide counters that we came across were as follows: Economic, moral obligation and duty towards spouses, children and parents and others, religious, social and ethical. The ideas of guilt and having sinned carry a low suicide potential in the depressive in the Indian culture. Many patients who contemplate suicide do not proceed to its completion owing to over-
whelming economic, moral, religious, social and ethical consideration. The care of their children, spouses a fear of stigma that would descend upon the family (who will marry my children if I commit suicide) and a fear of damnation in the hell after a suicidal death receive a serious attention. Indian philosophy and religion do not permit salvation to the soul of the suicides. All these indicate a participation of the super-ego or conscience. The super-ego in our context far from being tyrannical exercises a moderating or a commiserating effect on the ego's capacity to end up in suicide. The answer for this role of the super-ego may lie in the type of the family set up that stresses the collective rather than individual responsibility. The obligations rather than rights are emphasized. Religion and philosophy too participate since in the construction of the super-ego. The suicide counters in different group of death oriented thinking have also been worked up by us. 57% in the wish to die group and 48% in the wish to kill oneself group had suicide counters. A high risk of suicide attempt was seen in group A and B and in C and D groups it was low.

"I have said that in one respect my mind has changed...upto the age of thirty or beyond it, poetry of many kinds ...gave me great pleasure....formerly pictures gave me considerable and music very great delight. But now for many years. I cannot endure to read a line of poetry....I have also almost lost any taste for pictures or music....The loss of these tastes is a loss of happiness, and may possibly be injurious to the intellect, and more probably to the moral character by enfeebling the emotional part of our nature." This was an autobiographical account of the depressive symptomatology of Charles Darwin who was once a student of medicine in this city (Carin de Beer, 1974). Such expressions and experiences are not uncommon in other cultures also. It is to be noted that the depressive symptomatology emerges from a common mould though differing in certain non-core features, which are influenced by cultural factors.

That cultural factors determine the differences in the depressive symptomatology was brought out in a cross cultural study of the Zung's Self Rating Scale for depression. While there were no differences between those diagnosed as depressives in various cultures, the differences were brought out in the normal adult population (Master and Zung, 1977).

LITHIUM AND COURSE AND OUTCOME OF AFFECTIVE ILLNESS:

When we were presenting our findings on Lithium Clinic in the First British Lithium Congress held at Lancaster several years ago, doubts were expressed over the functioning of the clinic considering the tropical weather of our place, patient's compliance especially for a long term administration of the drug electrolyte loss through sweating, diarrhoea and renal function (Venkoba Rao and Hariharasubramanian, 1978). It is a characteristic feature to avoid drugs when one is healthy. However, we have overcome all these and our "Lithium Clinic" perhaps the first to start in Asia has been functioning for over a decade (Venkoba Rao et al, 1982). We have studied several aspects of Lithium use: dose and blood level relationship (Venkoba Rao and Hariharasubramanian, 1978), effect on course and outcome (Venkoba Rao et al., 1982), side effects, ECG changes (Venkoba Rao and Hariharasubramanian, 1980; Venkoba Rao et al., 1980), Renal function (Venkoba Rao et al., 1979), and renal biopsy (Venkoba Rao et al., 1981), electrolyte changes (K, Mg and Ca) (Srinivasan and Parvathi Devi, 1978; Hariharasubramanian et al., 1978), memory (Sugumar et al., 1980),
and finally its effect on pineal function (Parvathi Devi et al. 1980; Parvathi Devi and Venkoba Rao, 1982). Lithium increased RNA synthesis, enhances NE, SNT, fluorescence of the rat pineal, induced morphological hyperactivity in the pineal even after diencelectomy (Parvathi Devi and Venkoba Rao, 1982). Recently we compiled data to assess effectiveness of prophylactic lithium in bipolar affective disorders by comparing the lithium treated cases with those cases of bipolar depression who were treated prior to the starting of Lithium clinic. The influence of lithium on the course and outcome of depression was the ultimate object of study.

Earlier, Venkoba Rao and Nammalvar (1977) reported a follow-up study varying from 3 to 13 years after the index diagnosis of 109 out of 122 endogenous depressives with reference to the recurrence of episodes of mania and depression, changes of polarity, mortality from suicide and suicidal behaviour, chronicity and functional incapacity. Out of these 109, 42 cases with a clear diagnosis of bipolar disorder were selected and compared with 71 cases of bipolar attending the Lithium Clinic. The criteria for inclusion was a regular and a continuous administration of lithium for a minimum period of 2½ years. The two groups were comparable on the variable like age of onset of the illness and sex though the age at the time of index variation showed difference. The comparison was made in respect of (1) the number of relapses, (2) suicide behaviour, (3) chronicity, and (4) functional incapacity. The analysis revealed that the total number of relapses in the lithium cases were fewer than in cases of prelithium years showing a significant statistical differences. The duration and inensity of the episodes while on lithium were much shorter and milder respectively and the phases never exceeded 10 days each. It is interesting to note that the 42 patients of prelithium period resembled the lithium cases in their pattern of relapses prior to starting on lithium. One of the most important impact of lithium on the symptomatology was its effect on suicide behaviour. While there was one case of suicide in non-lithium group, no case of completed suicide was noticed in the lithium cases (Table IV). While 75% expressed suicidal ideation in non-lithium cases, in the lithium group the suicidal ideation fell to 25% of cases. While 21% among the non-lithium group attempt suicide, only 4.2% in lithium group attempted suicide. Similarly the chronicity and the func-

### TABLE III. Relapses: Non-Lithium Vs Lithium Groups

| Types of Relapses | Non-Lithium (N=42) | Lithium (N=71) | t  |
|-------------------|--------------------|---------------|----|
|                   | M  | SD  | M  | SD  |    |
| Total             | 5.7| 2.87| 2.6| 0.98| 8.32* |
| Mania             | 3.4| 1.87| 1.5| 0.96| 7.21* |
| Depression        | 2.3| 1.34| 1.1| 0.92| 5.63* |

*—p<.001

### TABLE IV. Suicide Behaviour

|                  | Non-Lithium (N=42) | Lithium (N=71) |
|------------------|---------------------|----------------|
| Suicide          | 1                   | 0              |
| Suicidal ideation| 32 (75%)            | 18 (25%)       |
| Suicidal attempts| 9 (21%)             | 3 (1.2%)       |
tional capacity was favourably influenced by lithium (Table V). Barraclough (1972) has calculated that one-fifth of the suicide among the Manic Depressive Psychoses was preventible by lithium therapy. Sainsbury (1980) by extrapolating the figure claimed that in England the total suicide would have been less by 750 per year. Coppen et al. (1981) have reported that with all antidepressant measures without lithium, patients spent 46% of their time with affective symptomatology.

PIEAL GLAND AND AFFECTIVE DISORDER

In Madurai work has been in progress on the study of the changes in pineal gland function in affective disorders. The experimental work on the pineal glands of the rats have been carried out with a view to study the effect of antidepressant drugs, especially lithium on the pineal gland (Parvathi Devi and Venkoba Rao, 1982). Our experiments so far have indicated that lithium exercises a stimulatory effect on the pineal gland, even when it is rendered hypoactive resulting in an elevation of pineal hormones. We have carried out urinary melatonin estimation in depressive patients during the pre and post treatment phases (Venkoba Rao et al., 1984). Twelve cases of depression (8 endogenous and 4 neurotic) were studied with a view to explore the possible association between the urinary melatonin and the illness prior to and following treatment. While cases of endogenous depression had low 24-hour as well as nocturnal urinary melatonin levels, the neurotic depressive showed higher than the normal levels. The rise in the 24-hour melatonin levels occurred in all cases of endogenous depression though this did not apply to nocturnal levels. The relation between the urinary melatonin and certain symptoms were studied (Venkoba Rao et al., 1984).

SUICIDE BEHAVIOUR:

Wetterberg (1981) reported in a longitudinal study of MDP patients the association between suicide behaviour and diminished melatonin levels. In our series suicide attempts were made by 5 cases and in 3 of them the 24-hour melatonin level was lower than normal. In one, the level was about normal. All these 4 cases suffered from endogenous depression. In 5th case of neurotic depression, the initial level was double the normal. It was evident that suicide attempters excreted lesser quantity of melatonin than the non-attempters and this was particularly observable in the night volumes. Following treatment the score of HKSD came to 0 in all but two of the 12 cases. While in the endogenous depression, there was an elevation in the 4-hour urinary melatonin secretion, in the neurotic depressives, the levels fell after the treatment. Insomnia: All the cases had sleeplessness at index evaluation and 8 of the endogenous depressives had late night insomnia. The 4 neurotic depressives had early night insomnia. The endogenous depressives had a low nocturnal melatonin level while the neurotic depressives had night levels that exceeded the day levels. Following treatment, the levels went up with the reversion to the normal sleep in these cases of endogenous depression. In two other endogenous cases there was a negligible fall in one

| Degree of efficiency | Non-Lithium (N=42) | Lithium (N=71) |
|----------------------|--------------------|---------------|
| Total Restoration    | 32 (75%)           | 59 (83%)      |
| Needed supervision   | 2 (4%)             | 10 (14%)      |
| Dependent            | 4 (10%)            | 2 (3%)        |
and a drastic fall in the other.

**Diurnal variation:** The pretreatment diurnal variation of symptoms was present in 7 of the 8 endogenous depressives and this receded in 4 of them but persisted in rest of the 3. Wherever the diurnal variation disappears the 24 hour melatonin levels rose. The psychomotor retardation paralleled with low melatonin level and rose to normal following treatment.

The important observation from this study was though the total urinary melatonin rose in 7 cases of endogenous depression, the day levels continue to exceed the night levels, except in 3 cases. This observation is in keeping with that of Mendelwicz et al. (1980) who reported the reversal of normal pattern with treatment in 3 out of 4 cases. The failure of reversion to normal may be prognostic of the relapse. This remains to be seen. Some of these observations point out that in some depression the pineal hypofunction is at the basis or a part of a widespread biological disturbances. A low melatonin syndrome in depressive illness is being delineated (Beck Friis, 1983; Venkoba Rao et al., 1984). A low melatonin correlated with symptoms of sadness, lassitude and inability to feel emotions in the report by Beck Friis (1983). Venkoba Rao et al., (1984) found such features as severe depressed mood, helplessness, hopelessness, worthlessness, inability to work, gastrointestinal symptoms, a significant absence of anxiety in their low melatonin group of depressives.

**CONCLUSION:**

The past decade has rightly been called the decade of depression, in view of the enormity of research on the subject. It was nearly nine decades ago that Emil Kraepelin masterminded a dichotomy of Manic Depressive Psychosis. His descriptive contribution stands, though we have travelled quite far from his times. Research is an ongoing affair without any finality and moves on as an old Arab saying goes until "the sun grows cold, stars begin to grow old and the leaves of the Book of judgement close."

It is our frailty that makes us exclude other contributions and prize our own: It is worthwhile recalling Romain Rolland: "In the concert of the world, the orchestra is made up of all the centuries; past and present and they all play at the same time but each has his eyes fixed upon his own stand and the conductor's baton; he hears nothing but his own instrument." No one's life is a clear and a cloudless sky; there are bound to be clouds with varying melanic hues.

"Heart aches and a thousand natural shocks" to borrow from Shakespeare plague us. Under these circumstances, as William Oster recommends, in the physician in us "there must be a mingling of waters of science and the oil of faith." Faith is indispensable for coping. It will be appropriate to conclude this presentation with the Nobel Prize Winning lines of Rabindranath Tagore:

This is my prayer to thee, my lord—
Strike, Strike at the root of penury in my heart
Give me the strength lightly to bear joys and sorrows,
Give me the strength to make my love fruitful in service.
Give me the strength never to disown the poor or bend my knees before insolent might.
Give me the strength to raise my mind high above daily trifles.
And give me the strength to surrender my strength to thy will with love.

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