CHAPTER 26

Other Diseases

So far we have been discussing some of the major psychosomatic diseases, which are well known to be caused by excess of stress and strain in life. We have not touched upon many other conditions which have no such definite psychosomatic basis. Some of the borderline conditions will be discussed below and also our experience in the management of some of their victims with the help of Yoga.

Enuresis

This is a condition which is also known as bed-wetting in children at night, consisting of unintentional passing of urine. Normally, as children grow older, they gradually develop voluntary control over the rectal and urinary spinctures. However, when even after the age of three years, bed-wetting at night persists then it should be taken as pathological state which needs some treatment. However, a majority of even these bed-wetters regain their full bladder control by the age of 10 years or so. Even after this, if the child still wets the bed at night then one will have to investigate the matter for having any pathological lesions in the urinary tract such as bladder neck obstruction, neurogenic diseases, urinary tract infections etc. If all these physical causes are excluded then one should suspect the possibility of abnormal psychological factors as the causative agent for the production of enuresis.

In such intractable cases of psychogenic origin, with the disease continuing even after puberty, several psychotropic drugs had been tried such as Amphetamine and Imipramine (Tofranil) with some beneficial results. Some workers have
even suggested an alarm system to be attached to the bed which gives alarm the moment it starts wetting. However, this does not treat the main psychological factors responsible for producing enuresis. Even after giving psychotherapy to these patients one does not get any desired results. Hence we advise yogic practice in such intractable cases of enuresis of psychogenic origin with remarkable good results. A history of one such case will illustrate the point.

Miss K. aged 21 years had been wetting her bed since childhood. Sometimes, such bed-wetting would be almost every night especially in winter season, whereas in summer it occurred only once in a while. She could not go anywhere outside her home because of the fear of wetting the bed at night in those places which would put her in an embarrassing situation. Hence, though she was a grown-up girl, psychologically she had a stunted growth and was very shy and introverted in her behaviour. For overcoming this trouble, the family physician had undertaken all the investigations, physical and psychological, to find out any lesion. Since nothing physically abnormal was detected she was put on amphetamine one tablet twice a day for six weeks with no relief. Then she was put on Tofranil for 2 months with no visible change. Then her parents came to me for consultation and we suggested a course of yogic exercises comprising 6 common postures (See Appendix) daily. To our great surprise the patient completely got over this disability within a period of 3 months to full satisfaction of the patient and her relatives. We have now followed this patient for a period of 6 years with no evidence of any recurrence and she is now leading a happy married life.

From this one can conclude that enuresis of psychogenic origin can be effectively treated by yogic practice. It seems that by practicing Yoga, the central nervous system starts exerting greater influence on the Micturition Centre in the spinal cord leading to better control and coordination of the process of micturition. Therefore, one should try this method in the management of some of these intractable psychogenic enuresis cases,
Epilepsy

This is a convulsive disorder which usually starts either in childhood or around puberty. The severity of such a convulsive attack varies from single attack after a year or so to several attacks per day. Because they are generalized seizures, these attacks may pose a constant threat of injury such as when occurring near a fire-place or water reservoir leading to serious consequences. The diagnosis is usually made by the typical history and also by the typical findings in EEG. In the history, one could suspect a cortical lesion, during the intrauterine life or neonatal period, or the presence of noxious chemical agents, trauma or infection in later life. Once the diagnosis is fully established one will have to plan specific treatment depending upon the causative factors and severity of the attacks. After planning the removal of precipitating factors one will have to advise a prolonged intake of modern anticonvulsive agents such as Luminol, Dilantin, Mysoline, Mesantoin, Mebarol etc. Apart from the use of these drugs which would selectively produce their action on the affected point of the brain, there is a need for giving psychotherapy and also psychic restorative therapy. Otherwise, many times though the patients are free from seizures, they remain mentally subnormal and depressed and hence, lose all the interest in leading a normal life. In such cases, psychotherapy alone may not be sufficient and so we recommend some form of yogic therapy which might help the patient to get over the inferiority complex. Such a practice may also reduce the quantity of intake of drug and may also reduce the duration of treatment. Dr. Ramamurti and his colleagues in Madras are trying the biofeedback system by which they expose the patients to the alpha waves from external sources with some gratifying results. Our own experience with the use of yogic measures in epilepsy is limited to only five cases. Although we cannot make any definite statement in this regard, we do feel that this is an area which needs much more research to establish the utility of yogic therapy. A patient who is presently undergoing yogic therapy is free from the attacks for the last 6 months and we have reduced the intake of
anticonvulsive agents by 50% without any untoward incident. Hence, we feel there is a great scope for improving the overall result of treatment by including Yoga therapy as an adjuvant treatment in epileptic cases.

Psychiatric Disorders

It is not yet quite clear whether yogic measures have any role to play in the well established cases of psychiatric disorders. Earlier, we have already discussed the role of yogic measures in various types of neurosis especially anxiety neurosis. However, in well established cases of personality disorders and psychotic conditions, yogic measures do not seem to be having much beneficial effect. But, it is expected that as in the cases of other psychosomatic conditions, if Yoga therapy is instituted in the initial stage of the disease along with known therapeutic measures, it might help to overcome the disease. This is specially so in the early cases of Schizophrenia, in whom we had some experience of advising yogic exercises with gratifying results. However, this problem needs further study and assessment.

Similarly, in cases of drug addiction and chronic alcoholism also, transcendental meditation has been tried by many workers with good results. The results were specially gratifying in the intractable cases of drug addiction for which there is no satisfactory method of management. There is obviously a great scope for further study in all these psychiatric conditions especially of the role of various methods of Yoga therapy either as principal therapy or as an adjuvant.

Skin Disorders

It is well known that psychological changes are directly reflected on the skin through the autonomic nervous system especially the sympathetic nerve endings. Thus, if one gets an emotional disturbance, it is directly reflected on the colour and temperature of the skin which is brought about by the changes in its microcirculation. It is well know that those who have a better control over their emotions either congenitally or as a
result of training and learning, will have comparatively by less amount of skin changes after any such emotional disturbances. There are expert yogis who have mastered the technique of voluntary control over the involuntary functions. These people through regulating their sympathetic nervous system can modify their body temperature at their will. Thus, they can raise the temperature of the right hand by 3° F and at the same time can reduce the temperature of the left hand by 3° F. It is this fact which ultimately led to the development of skin biofeedback system by measuring its temperature before and after undergoing the relaxation posture. In fact, there are simple skin temperature measuring devices for the extremities by which one can always assess how much one is emotionally disturbed at a given time and how much he can be benefitted by his subsequent practice of Shavasana type of yogic practice everyday. This matter has been further discussed in greater detail in the chapter on biofeedback. It should be noted here that skin and its appendages like sweat glands are richly supplied by the sympathetic nerves. As a result, any stimulation or depression of the sympathetic nervous system will produce pathological state of the skin. Because of this, all the stress diseases of the skin such as neurodermatitis, eczematous dermatitis, hyperhydrosis, psoriasis etc. can be assisted by various yogic measures including skin biofeedback and relaxation postures.

As in the case of others various tranquillizers can help the patients only temporarily to tide over their acute conditions. However, in order to reduce the sympathetic overactivity in all such cases, the relaxation posture type of yogic exercise and also meditation would be of great help as an adjuvant treatment. So far we have not subjected any of our cases to this type of treatment. However Dr. Melkote, presently of Yoga Institute, Tirupathi, had a unique experience of treating a large number of psoriasis cases with Yoga therapy with remarkably good results. From these preliminary observations of Dr. Melkote, one can say that there is a great need for making further studies on the role of Yoga therapy as an adjuvant in the treatment of stress induced skin disorders.
CHAPTER 27

Conclusion

Historically speaking, Virchow and his colleagues were the first to lay down the foundation of modern cellular pathology in the middle of the 19th century. Since then, modern medical scientists have been making full use of this basic knowledge for understanding the various disease processes in order to make correct diagnosis and offer accurate treatment. Because of its utility, modern medical men devoted most of their time to the understanding of the pathological changes occurring in each organ in great detail and the pathogenesis of development of such a disease process, and the early manifestations were given comparatively less importance. This is possibly because of the fact that various functional and biochemical changes that occurred during the early period of these disorders could not be established fully due to the lack of accurate methods.

As a result, the study of pathology of each organ was considered as a separate and independent entity. This led to the establishment of many specialities and subspecialities in modern medicine. In spite of an enormous progress made in these special fields during the past half century or so, we still do not know how exactly all these systemic stress diseases are caused and how one can prevent the development of these diseases. Further, as our urban civilization and industrialization increases the incidences of many of these stress diseases such as hypertension, inchaemic heart diseases etc. are also rising at an alarming rate. Hence, we must establish the correct etiology and pathogenesis immediately in order to take prompt preventive measures against these rapidly increasing systemic disorders.
Conclusion

It is at this stage that one might get some idea from our ancient Indian medical literature which has emphasized greatly the holistic approach in the entire Medical Science. In the ancient Science of Ayurveda they take man as a whole with his entire psychosomatic constitution. In addition, they have described three humors which regulate all the bodily functions during health and disease. Along with this, they have also attached great importance to the well-being of sense organs, mind and spirit for maintaining a healthy psychosomatic personality. It is now known that centres for all the above-stated psychic activities are located in our brain.

Taking some clues from these ancient Indian medical thinkers we postulated that the brain with its known centres for the sensory and mental functions might be playing the main role in maintaining the balanced state of the entire body during all the stress and strain of life. The brain is able to maintain such a correct homeostasis by liberating various neurohumors, which our ancient medical men labelled as dhatu or humours. Amongst the various neurohumors three namely acetylcholine, catecholamines and histamine and its related substances appear to be the principal ones, and the remaining neurohumors may be taken as secondary ones. The cerebral cortex regulates the functions of the entire body not only by sending its nerve impulses to organs and tissues but also by regulating the microcirculation to each organ through the liberation of neurohumors in appropriate quantity. It is through this neurohumoral liberation that various hormones are secreted in the required quantity to meet the needs of all the bodily tissues and organs. In short, in holistic medicine it is the healthy state of the cerebral cortex which is the seat of all our psychic activities, balanced output of required quantity of neurohumors and hormones, which ultimately leads to the normal functioning of all the organs and tissues of the body. From this it follows that if there occurs any excess of environmental disturbances which are conveyed to the brain centres through the sense organs, then the functional disturbances may take place in various organs and tissues through the mediation
of disturbed neurohumors and hormones. Therefore, if one wants to study the pathogenesis of any such disorders one will have to study the disturbed state of psychic functions, disturbance of neurohumoral and hormonal patterns before one actually studies the disturbed functions of individual organs. It is here that the recent advancement in the study of neurohumors and hormones which has helped us greatly to measure these changes biochemically, has made a correct appreciation of their role in health and disease.

In fact, if one fully understands the role of these three neurohumors especially in regulating the microcirculation of our body, one can really appreciate their main role in the pathogenesis of various stress diseases. It is this fact which we emphasised greatly in this monograph.

In addition to the disturbance of environment there are two other factors which may be responsible for the development of stress diseases. Firstly there may be genetic factors which increase the susceptibility of a person to get a particular type of stress disease. From our studies, we can say that genetic susceptibility is possibly transmitted in the form of relative decrease or increase of various degrading enzymes of neurohumors such as cholinesterases, monoamine oxidases or histaminases. Thus, if the enzyme MAO is less there is obviously increased activity of catecholamines leading sooner or later to some type of cardiovascular diseases.

The second factor is the presence of intereoceptors in all the viscera, endocrine glands and blood vessels. Any disturbance at these sites will ultimately lead to disturbance in the respective centres of the cerebral cortex, which may also contribute to the development of some of the stress diseases directly or indirectly. However, this area needs further study. Once the stage has set in for the development of stress diseases due to any of the above-mentioned facts, there occur 4 stages in the pathogenesis of the disease.

At first the neurohumoral changes are mostly limited to various centres of the cerebral cortex leading to mainly psychic disturbances. In the second stage, the disturbances spread to
the hypothalamus and through it to autonomic nerves and neuroendocrine apparatus. At the third stage, the entire body neurohumors are disturbed causing functional changes in the whole body, and at the fourth stage the disease settles down in one of the susceptible organs or tissues. Even when the disorder has settled down in an organ, at first there occur only functional changes. Thereafter, there occur inflammatory changes in that organ including ulceration as a result of the development of autoimmune response brought about by the microcirculatory changes. It is needless to say that these changes in the individual organs and tissues are also brought about by various neurohumoral changes that occur in the process. Ultimately, as the process of autoimmune phenomenon subsides, the natural healing phenomenon sets in, which usually leads to fibrosis in that organ or tissue. Thus, atherosclerosis, pyloric stenosis, emphysema (after bronchial asthma) and hypothyroid state are some of the sequelae of the self-limiting processes of various disorders of stress.

From all this we can conclude that the main initiating factor in the development of stress disorders is the increased liberation of neurohumors by the excessively stimulated cerebral cortex. Therefore, it is now understandable that if one can learn to restrain the cerebral cortex, especially its psychic centre, one can be free from the development of various stress disorders throughout one's life.

It is here that Yoga can be of immense help to all in preventing the development of stress diseases, and thereby living a long happy and healthy life. In this connection the famous sage Patanjali says that a few people in society are resistant by nature to every type of disorders of stress, a few others develop such resistance after birth by the prolonged use of some of the restorative medicines, and most of the other people can develop such resistance only by the practice of various types of Yoga. The sage Patanjali has described eight limbs of yogic discipline (ashtanga yoga). Amongst them three, namely postures (asanas), breath holding exercise (pranayama) and meditation (dhyana) are the important ones for
our purpose. We found in healthy normal individuals that a regular practice of all these yogic procedures brings the neurohumoral pattern to normalcy. Thus, if there is an excess of a neurohumor it becomes less, and if there is less of other neurohumors or hormones they become increased, to come to the normal level. In addition, it also improves the functional efficiency of all the organs and tissues by improving their microcirculation.

One often asks how this yogic practice brings about the changes in the cerebral cortex and thereby in the neurohumoral content. Modern physicists put forward a theory that the level of human consciousness depends upon the mobility of atomic components of the human brain. If one can increase the mobility of these atoms by the practice of Yoga, one can improve consciousness to a higher level. Here, one should also remember that the more sensitive is the area, the more will be the effect of Yoga practice on that particular area. Thus, the psychic centre which is also supposed to be the area for spiritual growth, becomes highly efficient in performing its function after the practice of Yoga. Therefore, it becomes more efficient in controlling the centres of emotions, hunger, thirst etc. present in the limbic cortex and hypothalamus. Gradually, one can develop the power of voluntary control of involuntary functions of the body leading to more efficient functioning of the body and mind. These are some of the important hypotheses put forward by many workers, and our study both of healthy persons and the patients of stress disorders, fully confirms the above observations.

In addition, we had also the unique experience of treating nearly 400 patients of different stress disorders who underwent Yoga therapy with or without the help of biofeedback with remarkably good results (Table 9). In young patients with relatively recent history of stress diseases, yogic practice greatly helps in giving permanent relief. In older people, Yoga therapy can only act as adjuvant treatment to already well established medical or surgical treatment. But the most important thing to remember in this context is that yogic practice can play a great role in the prevention of various stress diseases
Conclusion

provided it is practiced with all sincerity and in a regular manner. Therefore, it is hoped that more and more medical men will study this problem in great depth and make use of this practice to the fullest extent in the interest of humanity as a whole.

Table 9

Follow-up Results of Yoga Therapy

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Disease</th>
<th>Total cases</th>
<th>Clinically Cured</th>
<th>Relieved</th>
<th>No Significant change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Hypertension</td>
<td>91</td>
<td>47</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>2.</td>
<td>Diabetes Mellitus</td>
<td>63</td>
<td>37</td>
<td>17</td>
<td>9</td>
</tr>
<tr>
<td>3.</td>
<td>Bronchial Asthma</td>
<td>85</td>
<td>43</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td>4.</td>
<td>Anxiety Neurosis</td>
<td>127</td>
<td>87</td>
<td>25</td>
<td>15</td>
</tr>
<tr>
<td>5.</td>
<td>Thyrotoxicosis</td>
<td>56</td>
<td>33</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>6.</td>
<td>Chronic Colitis</td>
<td>104</td>
<td>51</td>
<td>38</td>
<td>15</td>
</tr>
<tr>
<td>7.</td>
<td>Rheumatoid Arthritis</td>
<td>159</td>
<td>100</td>
<td>33</td>
<td>26</td>
</tr>
<tr>
<td>8.</td>
<td>Miscellaneous</td>
<td>101</td>
<td>58</td>
<td>23</td>
<td>20</td>
</tr>
</tbody>
</table>

| Total  | 786          | 456          | 200              | 130      |

| %      | 58%          | 25.5%        | 16.5%            |
CHAPTER 28

Epilogue

SOCIAL ASPECT OF YOGA

Everyday we realized that this world is moving at a faster rate than before. This is mostly due to the fact that science and technology are making a tremendous progress in every sphere of our activity. It is surprising that while making such a spectacular progress in the external materialistic world, we have comparatively made very little progress with regard to our understanding of man and his internal environment. In fact we have almost forgotten to take up this subject for our study. It is in this respect that our ancient sages have made remarkable contributions to the understanding of man, which can hold true even today as described in Kathopanishad. Hence what we urgently need at present is a synthesis of our understanding of external world as per modern science and technology and the study of internal world of man as per the study of our ancient sages.

Therefore the time has now come for a joint enterprise on the part of the modern scientists and the custodians of ancient wisdom so that something good may come out for the betterment of humanity as a whole. As Paul Brunton states, “Progress follows from the top, from leading circles and higher classes of every community downwards until it permeates the populace. The ideas and beliefs held by the most educated and enlightened ones slowly come to be received by those below. Their outlook and attitude count most in influencing the world. Therefore, it is to them particularly that the hidden philosophy is now addressed. The enthusiastic activities of European Scientists can now be harmonised with the calm contemplation of oriental sages.” In recent years many Euro-
Epilogue

peans and Americans have made many attempts. However, it is surprising to see that comparatively very few noted scientists have taken much interest in these most valuable sciences of man. They are still hesitant to take up such a project as could unravel the mysteries of human life. However it is expected that in the very near future more and more scientific institutions and scientists will join their hands with people of East to unravel the truth of man and his inner self.

It is surprising that even in India, there are only a few true experts on Yoga, who have shown some interest to join their hands with modern Scientists to explore the mysteries of this science for the betterment of humanity as a whole. Many Western scholars come to India, visit various centres and return home without encountering a good centre where Yoga is studied more scientifically and systematically for adoption by the rest of the world. They usually find a vast amount of literature on the subject, but can meet hardly any men with modern scientific outlook and also conversant with ancient literature on Yoga. After touring the entire country in search of authentic yogis and yoga centres, Paul Brunton wrote the following in a desperate situation: “For the general motive that governed my researches reflected itself in my main aim in the writing the book, which was to draw European and American people to the much neglected path of inner peace. And general Western attitude was that it had no use for the moribund survival of yoga any more than for other superstitions of a senile and sterile India. I had therefore to show that yoga at least possessed some living value.” Unfortunately even today various yoga institutions are in a stage of disarray. There is no standard and many unqualified people are doing unethical practices in Yoga not only in this country, but also all over the world. Discussing this unfortunate situation Paul Brunton states, “Yoga had been thought largely useless to the modern world, because it was held tight by fanatic faqueers in the crippling and unfortunate embrace of superstition. Dogmatic religion had deflected much of it from its psychological goal, whilst primitive magic had distorted another portion of it into a circus performance.”
How sad is the state of Yoga in India! Our ancient sages have made such a remarkable original contribution to the welfare of man. But the modern scientists of our own country do not take the trouble of making any attempt to explore scientifically this most important treasure of human knowledge. Nor they encourage Western scientists to come over here to collaborate with the genuine Indian workers to delve deep into the subject. It is really great human tragedy and God alone knows how long such a situation lasts. India Government has been generous enough to constitute a Central Council for Research in Yoga a few years ago, but it has yet to come off the ground level due to initial teething troubles. If at all any one group of people can be blamed for this pathetic situation in the field of Yoga, it is the Indian scientists, both pure and applied, including the medical men, who are largely responsible for the continuation of such a deplorable situation in the field of scientific study of Yoga. In this connection it is gratifying to know that the Indian Academy of Yoga has started functioning recently with its headquarters at Varanasi. Still it will take quite some time before they will be in a position to rejuvenate this great ancient science. However, one should thank some of the Western scientists and medical men who have recently initiated some useful studies in this field and we should await their results in the years to come.

In this respect it is worthwhile to recall the state of Zen Meditation in Japan. The word, "Zen" is nothing but "Dhyana" or concentration of yogic practice. This science reached Japan via China from India and then it flourished very well in a modified form. Paul Brunton writes on the subject as follows: "Japs never became blind adherents of the Indian born and Chinese transmitted customs. They used what was applicable to their own needs and rejected the rest. The ultimate aim of Zen was to create keen determined men with crisp clear mentalities who would be calmly active and skillfully concentrated in all their undertakings, who would spontaneously sink self in the service of their country. The dull lethargy, spectral melancholy, and anti-worldliness of many Indian monks did not suit
such a vigorous, optimistic and practical race..... Many of Japan’s most famous soldiers, statesmen, artists, and scholars were Zen trained men. Their ideal was a perfect balance of the inner and outer man with efficiency as the keynote of both; the quality of their meditation was so high that a half-an-hour daily practice was sufficient to keep them in contact with spiritual peace. Thus their worldly life did not suffer but was enriched.” While the Japanese could adapt Zen to suit their requirement for modern society, India has yet to modernize and standardize its yogic methods to suit the modern youths and other people of this vast country. It is this lack of understanding of the need of the modern Society of this country and abroad, which has delayed the universal acceptance of Yoga as a measure to maintain a perfect physical, mental, spiritual and social health.

However, there are silver linings in all the dark clouds. There are quite a number of private organizations and individuals who are trying to interpret the science and philosophy of Yoga both in this country and in many of the Western countries. Some of the well known Yoga Institutions which are functioning well in the country are listed below. The details of their activities can be obtained by writing to the Heads of these Institutions. This list is by no means exhaustive and a number of them might have been omitted due to the non-availability of fuller information. It should be noted that there is no single Yoga organization dealing with every aspect of Yoga.

*List of Yoga Institutions*

1. Kaivalya Dhama, Lonavla, Maharashtra.
2. The Yoga Institute, Santa Cruz, Bombay.
3. Ramamani Iyenger Memorial Yoga Institute, Poona, Maharashtra.
5. Anandashram, Pondicherry.
6. Divine Life Society, Rishikesh, U.P.
7. Bihar School of Yoga, Monghyr, Bihar.
8. Shri Ramanashramam, Teruvannamalai, Tamilnadu.

10. Satya Sai Institute of Higher Learning, Prashanthi Nilayam, Puttaparthi, A.P.

In short, there is a vast scope for undertaking massive efforts to explore scientifically, the Art and Science of Yoga and then spread the message among the common men not only of this country, but of the whole world.