THE PSYCHOLOGICAL REHABILITATION OF THE PATIENT AFTER A MYOCARDIAL INFARCTION

By Louis F. Bishop

Successful efforts at rehabilitation require attention to the patient's emotional adjustment irrespective of what his disability may be. In rehabilitation following myocardial infarction a special emphasis on social and psychological factors is appropriate because all of the elements of the circulatory apparatus are connected with and capable of reacting to impulses from the cerebral hemispheres, the interpretive areas of the brain. Therefore, a program of rehabilitation of the cardiac should include measures designed to mitigate emotional troubles and lessen the load on the heart.

I am of the opinion that the physician is the most important person in the psychological rehabilitation of a patient following myocardial infarction. A myocardial infarction with its suddeness and its collection of attending symptoms is an especially stressful event and it elicits in patients a primitive and virtually automatic response to danger.

Patients react differently to illness, depending on their personality make-up. This reaction may not be known at first to the physician who sees and manages myocardial infarction under varying situations. It may be a patient he has had under care for a long period of time with angina or hypertension, who suddenly has a myocardial infarction. In this case, the physician knows the patient, his life situation, his family, his financial condition, and is in a stronger position to help with the psychological rehabilitation. On the other hand, he may see the patient for the first time in the hospital or the coronary care unit, where all this has to be learnt in order to help with emotional problems following the attack. It is true that even a patient well-known to the physician may not always react as expected.

Because the physician is the key individual in the emotional rehabilitation of the coronary patient, it is important to know whether the physician himself is emotionally equipped to handle the problems of the acutely-ill heart patient. There are many Internists and Cardiologists who just should not take care of these patients, because they represent a threat to the physician's own security. Self analysis will tell the physician whether this kind of work is for him.

The Coronary Care Unit has lessened the stress on the physician, because it affords constant care and monitoring of the patient with a myocardial infarct, but in my opinion, it should not change the role of the physician as the most important individual in the psychological rehabilitation of the patient. The physician, however, is sometimes forgotten when the patient is in the coronary care unit, as he often has little to say regarding emergency procedures that may be necessary, yet he must continue to keep a good physician-patient relationship during this initial period.

It was expected when the Coronary Care Concept began that this would be additional psychic trauma to the patient with a myocardial infarct, but this has proven not to be the case. Very few adverse emotional reactions seem to occur as a result of this unusual environment. The modern units are so constructed that many of the earlier problems that might upset the patient emotionally no longer exist. There are now separate rooms where other patients cannot be observed. There are windows and clocks so that disorientation as to time and place does not take place. It is also realized that the patient, if the condition warrants, should be given a thorough explanation of the equipment and environment in which he or she has been placed.

The units have also afforded an opportunity to study the emotional reactions of patients to myocardial infarction, so that the physician is in a better position to handle the situation after his patient leaves the unit and comes under his direct care.

The usual pattern of emotional reaction following a myocardial infarct is—first, anxiety of varying degrees; then, denial—the patient may not believe that he or she really had a heart attack. The patient may protest the diagnosis unless it is clearly confirmed by the electrocardiogram and enzyme studies. Then, as he becomes aware of the problem and of what it may mean to him, it is not unusual to see some evidence of depression. In the unit, during these first days, the patient's behavior will give some indication of personality, and a difficult personality becomes evident once the patient is aware that he or she is going to recover.

What are the immediate steps that can be taken to lessen the anxiety that almost invariably occurs. This should always begin with what may seem obvious, but may not always be done as carefully as it should be, and that is a careful history, physical and laboratory examination to determine as near as possible the degree of injury to the myocardium. The physician is then in a position to explain to the patient in lay terms, the nature of his illness, which will give the physician the opportunity of emphasizing that the patient will recover and return to a normal life, as do the majority of patients, following myocardial infarction. If the physician will do this, although it requires time and effort, he will not hear such expressions as: "The doctor just talks to my wife" or "They must know something I don't know" or "I don't think my heart attack was that bad."

The less accurate the patient's perception of the realities of his situation, the more he needs the doctor's objective interpretation of it, in order to reorient himself. The common fears and questions that arise are:

1. Will I always be disabled?
2. Will I have another attack?
3. Will I continue to have a sex life?
4. What will my family do without my financial support?
5. Will my pacemaker break down? (if one proves necessary).

The reaction of anxiety (Fear)—denial—depression are the usual and can be managed by the physician and nurse. The nurse plays an important role in the care of the coronary patient. The way the nurse confronts the patient, how she handles his apprehension, the atmosphere she creates, may effect the course of the disease and recovery. There is developing in our country, in connection with the coronary Care Units, a large number of nurses with special training in coronary care. These cardiovascular disease nursing specialists can be of enormous benefit in the emotional rehabilitation of the patient. If the patient has been healthy mentally previously, usually he will react constructively. His initial anxiety will abate as his physical condition improves. In time, this patient will be able to face his problem realistically, accept whatever limitations may be necessary, and make suitable adjustments to his changed situation.

The phenomena of "Denial" may serve a useful purpose in the hospitalized patient, by lowering the

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psychological stress resulting from the acute episode. On the other hand, it may cause him to disregard restrictions. Recently, this occurred in my practice:

A patient (A.P.) following a myocardial infarction, was transferred from the coronary care unit to a private room where he had special nursing care. He refused to stay in bed and then, to even remain in the hospital. He signed himself out at his own risk. After he left the hospital, and went to his own apartment, he was again advised to stay at complete rest. After staying at his home for a few days, he was seen at the office, where again was noted an unstable electrocardiogram, and again, neurological signs indicating weakness of the right side. He was again asked to stay at rest at home for a further period of time, in order to stabilize the situation. A week later, he returned to my office. He told me that he had been to his office, and that he had resumed sexual relations with his girl friend who was living with him. As far as he was concerned he had made a complete recovery. He was again told that not enough time had elapsed for any normal healing process, either as far as the heart or the brain was concerned. He was again advised to continue a further period of rest, which again he did not do.

Denial may be useful during the acute phase of myocarial infarction, to keep down anxiety, which if extreme, can be harmful. If, however, denial, as in the example cited, keeps the patient from acting in his own best interest, it can be dangerous.

I might also state such a patient can cause a good deal of anxiety in the physician who has to manage his care.

Depression that follows myocardial infarction may be more difficult to treat than the attack, particularly if it is not recognized at first that the depression may have existed long before the myocardial infarct occurred. A recent example indicated to me how difficult this problem may be. I found rehabilitation almost impossible in this patient, and referred him, because of depression, to a psychiatrist. I received the following report.

"Mr. G. had an enormously difficult childhood. He was born in Poland. His father died around the time he was born. His mother died when he was five or six. He was the last of approximately ten or eleven children, and he recalled that his mother had very little time for him at all. He states that he believed that he had no place in her affections, but that was the way it was. When she died, he was brought up by his older brothers. They all just made out, but it seems obvious that he had a tremendous amount of deprivation when he was very young. He was of draft age during world war II, and he was drafted or enlisted. He was in the Russian army for more than six years. When he returned to his home in Poland, he literally found nothing—no trace of any of his brothers or sisters. Much later, he did find one or two of them, and had some contact with them.

He came to the United States, again with nothing, and made his way to a moderate income, marrying a woman, who is apparently quite neurotic and demanding. He has lived by work-work-work, all his life—and in this way has fought off depression, effectively. However, around the time of his illness, beside the problem surrounding his daughter, he was also realizing that he was no longer able to cope with some of the demands of his highly competitive field—the furrier trade—and his landlord was able to take advantage of him.

He sees himself as getting old, and this has played an enormous role in the pre-infarction depression, as well as in the post-infarction depression. Before the actual infarct, which was an extremely difficult one to diagnose because it was not a transmural one, he persistently demanded attention and help from the doctors for whom he professes great affection and respect, but who he feels let him down by not making the diagnosis of heart attack earlier, whereas in fact, he apparently did not have a coronary earlier, but rather a depressive equivalent.

After the heart attack, he has continued to be markedly limited and depressed. He has insisted on a precise description of exactly how much exercise he can do. Apparently desiring an authority figure for himself, probably the authority figure of his mother or father, which he never had. He really does want to be "mothered", and the only way he knows to cope with illness or depression or any psychological problem is to work, and work hard. Since he is unable to do this, he feels trapped. The psychiatric problem is to somehow bolster this man's failing ego, as he sees his work capabilities failing him. He is an extremely perceptive man, extremely well-oganized, and a rather warm human being, but he is fighting strong feelings of Paranoia as his work abilities seemingly are being taken from him. This is a man, in short, who does not benefit from being told to rest and take it easy, because this is the antithesis of the way he has solved all his problems in the past. Inactivity to him is a psychological blow, which can well extend to cardiac problems as a result."

After the initial phase or myocardial infarction, certain personality problems become evident.

Two rather classical types where rehabilitation may be extremely difficult are the following: First, the patient who actually enjoys his myocardial infarction. This is the individual who has been faced with stresses and strains to which he could not adapt or adjust. He had been under constant pressure and suddenly the advent of the myocardial infarction relieved him of the need to adapt or adjust and has removed the pressures. He gladly retreats into his illness. The second is the patient with hypochondriacal tendencies. Each day the physician is faced with a new set of complaints and disorders, for which no organic basis can be found. These patients need constant reassurance. Because sudden death can occur, there is always constant worry by the physician that their complaints may have a real basis, and so the management of such an individual requires a great deal of time and effort.

The usual cardiac patient can be managed by the physician and the nursing staff, but the use of a psychiatric consultation must always be considered. It has been suggested that when it is necessary, the sooner the better, because the patient is still feeling vulnerable, and perhaps his defenses are down enough to allow psychiatric investigation, which may not be possible at a later date.

There is a rationale for treating the post-myocardial infarction patient with psychotherapeutic agents. The use of psychotropic agents should not be stereotyped and should be individualized, according to the needs of the patient. For a long time, it was my custom to give nearly every post-myocardial infarction patient, Phenobarbital, which I still consider a useful drug to control anxiety.

There are now a host of new psychotherapeutic agents from which to choose. These have been called the minor tranquilizers. They seem to be more suitable than the anti-depressant sedative barbiturates. These are the Diazepine group or the Meprobamate group. The trade names include Librium, Serax, Valium, Equanil, Miltown.

As anxiety and depression scarcely ever exist alone, this raises the question of using a combination anti-depressant and anti-anxiety drug. My own custom has been to select one of the minor tranquilizers.

In the late recovery phase or post-myocardial infarction, should depression continue to be a problem, then consideration with the help of a psychiatrist should be given to the use of one of the anti-depressants. There is little doubt of the value of these drugs in the patient who has recently sustained a myocardial infarction, because they do help to calm and alleviate fear and anxiety.

In the convalescent phase or before returning to work, the therapeutic reasoning may be similar or entirely different, dependent upon the individual, his background, his response to life situations, his family situation, his job security, etc. Here, the selection of psychotherapeutic agents or whether they should be used at all may be more difficult.

The team approach has been emphasized recently in rehabilitation, and although the physician may be able to manage the patient's total rehabilitation in the majority of patients, he must always be aware of the team, which consists in such health-related professions as:

1. The vocational counsellor
2. The physical therapist
3. The nurse (already mentioned)
4. The psychologist
5. The occupational therapist
6. The social case worker

It is the role of the psychologist that is most important in the emotional rehabilitation of the post-coronary patient. This can provide additional insight into the patient's reaction to his illness, his methods of handling crises and resolving problems. There may be disadvantages to the 'team approach', and the question may be asked as to why the physician alone cannot take complete charge of the patient, calling in appropriate services as needed. The answer is that he can, but better comprehensive care can be provided through the team approach, than by the lone physician.

In our country, there have been multidisciplinary Teams conducting group psychotherapy for post-coronary in-patients and during convalescence. Obviously the group method is more practical after the patient leaves the hospital, although the team approach is begun soon after the attack. The usual team consists of the physician, the nurse clinician and the group psychotherapist.

The objectives of such group therapy have been summarized as follows:

1. To help the patient understand his physical condition.
2. To offer him help with specific problems arising from his cardiac disability (diet, drugs, exercise).
3. To lessen anxiety by providing an opportunity for ventilation catharsis and expression of feelings.
4. To develop awareness of behavior patterns that contribute to the illness (unrealistic expectations, excessive drive).
5. To reduce reliance upon unhealthy defense mechanisms such as hypochondria, depression and denial.
6. To develop ego strength and healthier coping mechanisms.
7. To utilize the group dynamic in reducing the sense of isolation so that members could offer support to each other.
8. To attain a fuller use of self within the individual's physical limitations.

It might be that this approach is not necessary in every patient, but many patients might benefit, if they were interested.

From the emotional standpoint of rehabilitation, there can be but one way that an individual with an unalterable lesion can live a satisfactory and useful life. He must learn to do that which he must do to take care of himself as a matter of habit, and aside from this, live every day as if he were going to live forever.

Finally, the physician should always prescribe himself in generous doses.

THE PROTECTIVE ROLE OF PHYSICAL ACTIVITY IN ISCHEMIC HEART DISEASE

By Benjamin N. Chiang

In order to test the hypothesis that regular physical exertion and restricted diet may alter the risk factors in the pathogenesis of ischemic heart disease due to coronary atherosclerosis, a comparative study of physical characteristic and exercise performance of 100 Chinese pedicabmen and 1,346 Chinese from upper socioeconomic class aged 40-59 years was done. Maximal treadmill exercise was performed in both groups, and post-exercise ST depression $>$ 1mm was used as an indication of transient myocardial ischemia. In addition, a detailed medical history, physical examination, anthropometric measurements, hematocrit, urinalysis, blood sugar and cholesterol, FEV_1, chest X-ray and resting ECG were also done. The pedicabmen were of comparable age and height, yet significantly lower mean body weight, skin folds, circumferences of arm and waist, and serum concentrations of cholesterol and uric acid were characteristic of greater physical conditioning and prolonged dietary restriction. Greater exercise capacity, delayed acceleration of exertional heart rate and more rapid postexertional deceleration of heart rate in pedicabmen documented physical conditioning of the cardiovascular system. Whereas the usual trend for progressive increments in age specific prevalence of ST segment depression after maximal exertion was clearly demonstrated in upper social economic class Chinese of sedentary work from 40 to 59 years, there was no statistically significant difference among the pedicabmen of the same age group. The protective role of dietary restriction and prolonged, enhanced physical activity imposed on Chinese pedicabmen might be inferred from these observations.

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