The Family and Cardiac Rehabilitation

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Family resources and needs are often overlooked in planning for rehabilitation of the individual following myocardial infarction. The acute ischemic event presents a massive disruption in the psychodynamic balance of the family, but it can provide an unparalleled opportunity for increased awareness and growth for all members of the family. An integrated program of emotional support, education, and physical activity is recommended to facilitate restoration of the individual's self-esteem. Formal family counseling provides a forum for resolution of fears and misconceptions and permits redefinition of roles within the family.

Psychological care in myocardial infarction begins with the individual's first contact with the primary physician and continues until successful adaptation has been made. Many factors operate before, during, and after the acute ischemic episode to determine the emotional substrate, reactions, and rehabilitation of the individual. Attitudes of the individual's family are particularly important throughout and after the hospital period, and are probably the predominant influences in determining the individual's psychological adaptation and subsequent course. The purpose of this paper is to review these psychological aspects of cardiac rehabilitation and to outline an optimal program to meet the needs of individual and family.

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None of the papers reviewed for this article addressed the specific psychological needs of the woman experiencing myocardial infarction. To stress the importance of person-centered care,[1] the word "individual" rather than "patient" is used to describe a person who has experienced a myocardial infarction.

Understanding Initial Reactions

After a myocardial infarction, the individual defines his/her functional capacity regardless of medical criteria. He views himself as still sick or as well and, through his actions, seeks to convince those around him of his perceived status. If the family agrees with his assessment, their support will facilitate the recovery process. Where agreement is lacking, the resultant conflicts can severely hinder rehabilitative efforts.

It is essential that all members of the rehabilitation team, especially the primary physician, understand the individual and family psy-

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chodynamics involved in each case. After assessment of family values, structure, and strengths, responsibilities can be allocated for the emotional support of the individual during the recovery process.

Although the psychological and physical insult during myocardial infarction is a massive one, this period offers the individual—and his family—opportunity to enhance personal awareness and subsequent growth.

Prehospital Factors

The individual's personality and life-style often dictate his initial reactions to the myocardial infarction. Individuals often deliberate up to three to four hours before seeking medical care,[2,3] during which time they consider less serious possibilities, such as gastrointestinal distress. Only when the individual is unable to fit his symptoms into less threatening patterns does he consider heart disease and initiate a request for medical help.[4] When asked late in the hospital stay, less than 40 percent of individuals correctly identify the heart as the source of their initial symptoms.[3,5] Davidson interviewed 25 individuals within 24 hours of admission for acute chest pain and found that 76 percent properly identified the heart as a source of their chest pain.[6] It appears that, after individuals leave the Coronary Care Unit (CCU), they frequently minimize the seriousness of their illness and their description of initial events is sometimes changed.[7]

During their husband's chest pain, spouses are often uncertain whether to seek help or simply reassure their husband,[8] and are often less influential than friends or associates in the decision to seek medical attention.[5]

Emergency Room

If prompt reports about the ongoing assessment of the individual and the likelihood of myocardial damage are provided for the waiting family, much individual and family anxiety can be relieved. A member of the medical or nursing staff should accompany the individual and the family to the Coronary Care Unit, facilitating the psychological transition between the Emergency Room and the Coronary Care Unit where the individual will be spending the next few days.

Coronary Care Unit

Each individual experiences some degree of psychological discomfort in the CCU resulting from uncertainty about his situation, his family, his employment, and the changes within his body and heart. Most individuals gain reassurance from an explanation of the cardiac monitor,[9] the treatment plan, and probable length of stay in the CCU. The individual and his family benefit from frequent periodic information and reassurance about his condition, especially during the first hour or two in the Unit.

The problem of individual disorientation in the Coronary Care Unit persists despite the introduction of television sets, clocks, and other sources of visual and auditory stimuli besides the cardiac monitor. News of sports and other events will help orient the patient in time. It is important to notify the individual about schedules and schedule changes. As Rahe points out,[10] when individuals are previously accustomed to efficiency and explanations from others, they may find the CCU a particularly frustrating environment.

Early Anxiety and Fears

A myocardial infarction presents a massive psychological trauma for most individuals, frustrating the need for reasonable order, planning, continuity, and control. The realistic risk of sudden death, especially in the early hours and days of hospital care, produces anxiety, and may postpone effective use of coping mechanisms.

Hellerstein[11] has described the fears of the individual after myocardial infarction as four questions to himself. *Will I live?* The fear of death is paramount and it requires much education and reassurance to help the individual cope with his fear. *Will I love?* Many individuals with heart disease and their wives express fear of death during intercourse. *Will I work?* Blue collar workers remain out of work longer, are less likely to resume full employment, and have the greatest loss of income.[12] *Will I thrive?* The individual continues to judge himself against society's expectations and

often considers himself much less a man than before this catastrophic event. It is likely that many individuals have felt these same concerns before, but have given them conscious consideration only after the myocardial infarction has forced reassessment of priorities and goals.

Stages of Adaptation

The first two days in the Coronary Care Unit are frequently characterized by anxiety and denial. With or without psychotropic drugs, individuals later find it very difficult to remember the early stages of their hospitalization.[13] During the third and fourth days, a developing awareness begins as the individual's physiological condition becomes stable, and his intense fear of death has been attenuated with reassurance. As reality replaces denial, depression and anger surface. Throughout his illness, the patient finds his passive needs met by family and team, and this encouragement toward dependency makes it very difficult for him to later give up the sick role. Finally, resolution and acceptance allow the individual to relinquish some of his dependence, and assume responsibility for setting realistic goals and determining the means to achieve them.

As with Kübler-Ross's stages of dying,[14] the individual with myocardial infarction may experience any or all of these behavioral responses, and not necessarily in the same sequence or with the same intensity.

Initial anxiety is often manifested by excessive talking and an inability to concentrate, understand, or retain information, and by physical restlessness, muscular rigidity, tremulousness, or diaphoresis. It is important to anticipate the individual's emotional stress over any change in the medical regimen and, in particular, his move from the CCU to the convalescent cardiac ward.

The stage of denial is often characterized by the individual's avoidance of discussion regarding his myocardial infarction, its severity, consequences, and significance. He copes with anxiety and the threatening situation by ignoring that which exists. The team can support the individual by listening but not confronting the denial, since it is often a useful coping mechanism during this phase. Conveyance of concern and review of his ambulation schedule are often more successful than threats.

The depressive phase of recovery is characterized by expressions of hopelessness, slowness, brevity of speech, loss of appetite, and possibly expressions of direct or projected anger. As he begins to consider the effect of his myocardial infarction on his future, a loss of self-esteem may result from concerns over employment and independence, and fears of sexual impotence and invalidism. He should feel free to express his feelings and should be reassured that they are appropriate for his situation.

Styles of Adaptation

Scalzi[15] described several adjustment styles seen in the Coronary Care Unit. Each requires a different therapeutic approach.

The obsessive-compulsive style of adjustment often represents an attempt to structure the situation, place it in order, and study its conditions in detail. As this individual reaches out intellectually for control and the meaning of his situation, he will require much information to occupy his mind.

By contrast, the person showing dependence is quite aware of his inability to control the situation, and thus turns to the team with positive expectations. This reaction may be protective during the early stages in the CCU, but later, the individual must be helped to assume responsibility for himself.

Some individuals display a hyperindependent state. Their fear of being considered dependent results in anger at any attempts to help them. The team can tap this source of energy by respecting this anger, "giving permission" to the individual to be cared for by others, but also by allowing him to share in decision making whenever possible.

Some individuals respond in distrustful ways. As in earlier life situations, they expect to be hurt or disappointed during their hospital experience. Responses to this individual should be neither hostile nor overly accommodating, remembering that fear often underlies this behavior.

Most individuals experience depression in the hospital and spend considerable time reflecting about the etiology of their condition. Where family conflicts exist, the myocardial infarction may elicit considerable neurotic guilt. As many as one in five men considered that problems with their wives were an important cause of their myocardial in-

farction. Of those with children, approximately 25 percent felt that upsetting problems with children contributed to their heart attack.[16] Depression should not be viewed entirely negatively by the staff, since it does represent an acceptance of the situation and is often the first step toward change.

Overt sexual behavior within the CCU is most common in the 50 to 60-year-old male and often accompanies anxiety. This anxiety probably results from the threat to the self-image and fears of sexual inadequacy or impotence. Early advice regarding sexual activity following hospital discharge will greatly alleviate the anxiety and help him feel more adequate as a person and a man.

Quantitative measures of psychological status showed that the physically sicker individuals were more cautious, defensive, preoccupied with their body, dissatisfied with preexisting family and social life, and had less ego strength, self-esteem, potential for adjustment, and sense of reality.[17]

At this stage, the team must transmit understanding of the individual's feelings and, through this understanding, allay his fears. He should expect weakness during his ambulation and should be prepared for stress during his transition from CCU to the cardiac ward, and from the ward to his home. A physical activity prescription should be given,[18] which will help the individual reestablish confidence in his body.

Early Family Reaction

Orientation to the CCU is important for the family, since they often find the environment even more intimidating than does the individual.[13] Often they are reluctant to approach the physician and sometimes do not even obtain needed information from the nursing staff. The individual can deny or delay his adjustment, but the family is immediately threatened with modification or dissolution and must start coping immediately. Where prior marital problems exist, they tend to become worse, particularly when they involve issues of dependency.[19]

The individual perceives himself as totally dependent upon others for his well being. He needs attention, warmth, and encouragement, but often considers himself alone. His family may be incapable of dealing with the psychological stresses placed upon them by his illness.

Because CCU visiting hours often restrict his family's visiting time, many of the individual's emotional needs must be met by the team. It is important for the family to be kept fully informed of his emotional states, to avoid transmission of their own fears and anger.

All spouses interviewed in one study reported immediate numbness and panic and a sense of unreality when faced with the prospect of loss of their loved one.[8] They are often quiet and depressed and rarely feel justified in expressing their anger and aggression. They often tend to blame themselves for their mate's illness and search for a cause. Their grief reaction is characterized by a sense of loss, depression, anxiety, sleep disturbances, and guilt. They may develop new psychosomatic symptoms. These characteristics are seen more often in spouses under 45 years of age and in those with a previous history of psychiatric disturbances, but are unrelated to social class. However, middle and upper class wives sought psychological counseling more frequently. When the severity of illness is considered, it is found that spouses of sicker individuals are less dominant, less self-confident, and have more anxiety.[17]

Psychological Treatment

The attitudes and patterns formed during the hospital period will greatly influence family dynamics after the individual returns home. It is particularly important that the family have the same expectations and attitudes as the individual about his capabilities. To facilitate this, a program of physical activities which begins in the CCU can be used.[18] This offers an early boost in self-confidence, utilizes the continuity and knowledge of the CCU nursing staff, and ideally involves the family physician.

CCU to Ward Transition

Some individuals describe this transition as the period of greatest stress, leaving the security of

the CCU for the noisy conditions of the cardiac ward where they will receive considerably less individual attention. During this time, they often ask no questions, leading to the perpetuation of misconceptions about their clinical status.[13] Some of these problems can be alleviated by an interchange of staff between CCU and the cardiac ward, so that familiar faces are seen and the rehabilitative effort is seen as a continuous one.

Written reference material can be distributed and discussed with the individual and family. Lectures to groups of individuals and families during the hospital phase have been successful.[20]

Hospital to Home Transition

The individual's return home often requires a redefinition of roles for husband and wife. For most men, it is their first experience of living at home all day, and often involves unwilling participation in the management of the home and disciplinary problems of the children.[21] Individuals and family often tend to maintain coping patterns established at the hospital and continue to be cautious and dependent. These actions often conflict with a desire to reestablish previous family roles. The individual's reactions upon returning home typically include weakness, insomnia, and boredom. Exaggerated dependency and irritability often lead to tension and hostility within the home. Individuals who are easily depressed at this time make poorer psychological recovery during the ensuing year.[22]

The illness often allows expression of attitudes and urges which have not been verbalized previously. A man with a dominating wife or demanding children can use his myocardial infarction to gain the dominant position in the family. Other men find in their illness a socially approved means for avoiding responsibility and an accepted reason for early retirement.

The individual often denies his worries while in the hospital; after returning home, many of these concerns are brought back to the conscious mind for resolution.[13] The wife is frequently oversolicitous, over-cautious, nervous, with a great fear of upsetting her husband.[21] These fears may immobilize her when her husband has recurrence of chest pain. Most wives are apprehensive about their ability to provide an adequate diet for their husbands and express concerns about his ability to follow medication and physical activity prescriptions.[10]

The husband often sees this overprotectiveness as a threat to his male ego rather than as simple concern. In reasserting his dominance within the family, he may become irritable and ignore medical restrictions. The family must feel comfortable in confronting the individual if his behavior jeopardizes his medical recovery.

Good performance on a treadmill test prior to hospital discharge indicates a low probability of cardiac events in the following two years.[23] It offers a baseline by which the individual can regulate his home activity. The energy requirements of sexual activity can be related to the levels of physical activity performed safely on the treadmill. At present, however, less than half of physicians use treadmill testing at any time during their treatment of persons after myocardial infarction.[24]

In evaluating family perception of allowable daily activities for the myocardial infarction patient, New[25] noted that the children of an individual viewed him as much more handicapped than did his spouse. However, children respond in much the same way as the spouse, feeling somehow responsible for their father's illness. They, too, prefer to minimize interpersonal conflicts. There is a tendency by some men to assert their masculinity during this period by physical threats to their children.

Thus, the family may best help the individual by being supportive rather than directive, and understanding the personality changes which he may display upon his return home.

Outpatient Visits

Individuals often feel that their outpatient visits immediately following hospitalization are too infrequent for adequate reassurance.[13] Biweekly contact with individuals during this period by telephone is seen by the family as an expression of interest and a bridge between the security of the hospital and the home with its many sources of anxiety and frustration.[19,26]

Some individuals place undue emphasis upon

each measure of their physical status during their follow-up visits. They ascribe great importance to any changes in blood pressure, pulse, or auscultation, but are often afraid to ask directly for this information. Instead, they search for meaning in the physician's expression and notations on the chart.

Community Programs

Baden[27] describes the important contribution of a community program in reviewing information which the individual and the family did not assimilate during hospitalization. In six weekly sections, topics covered (in order of presentation) were physiology and anatomy of the heart and coronary arteries, cardiopulmonary resuscitation, instruction in taking the pulse, psychological adjustments within the family, medical regimens, diet regimens, and energy expenditure in various forms of activity, including sexual activity and the postprandial period.

Individuals may begin exercise training programs, such as those offered by the YMCA,[28] 12 weeks after a myocardial infarction. Exercise therapy follows a cardiovascular history, physical examination, exercise electrocardiogram, pulmonary function test and exercise prescription, and initial individual education regarding his cardiovascular disease, the treatment regimen, and any modification of his risk-factor profile. The results of testing are discussed with the individual and his family.

To achieve optimal cardiovascular conditioning, persons must actively exercise a minimum of 30 minutes three times per week. A typical exercise session in the YMCA program begins with a 20-minute warm-up. The cardiovascular conditioning period consists of 30 minutes of jogging or walking, during which each individual uses his prescribed target heart rate to pace his activities. Finally, a cool-down period of ten minutes allows a return to normal resting blood pressure and heart rate. This type of program can be successfully carried out by CCU-qualified nurses with no need for immediate physician attendance.[28]

Hellerstein[29] has shown that individuals participating in exercise programs have less depression and an increased sense of well being. Individuals report less need for tranquilizers and sleep medications and have an increased ability to cope with stressful situations.

Sexual Adjustment

Both partners may have exaggerated fears of the level of physical activity required by intercourse. Bloch[30] evaluated 100 persons one year after myocardial infarction. Fifteen reported no sexual intercourse before myocardial infarction, and none started after myocardial infarction. Of the 85 who had intercourse before myocardial infarction, 19 abstained, 10 greatly diminished their activity, and 33 moderately decreased it. Only 21 reported no change or an increased frequency of sexual activity. Signs of latent depression and fear of relapse or sudden death during coition were cited as the main reasons for the altered activity.

Jackson[31] evaluated sexual activity in 35 individuals monthly after infarction. Twenty-nine (85 percent) reported intercourse after myocardial infarction, 19 of whom developed angina on many occasions. Patients were reassured about the safety of intercourse and treated with beta adrenergic blocking agents. They were advised to use long acting nitrates if pain occurred despite the beta blockade. All patients were subsequently pain free during intercourse. Four of the six previous abstainers resumed sexual activity.

It was previously thought that some sexual positions required less energy than others, but it is currently considered that for most couples any of the conventional positions is safe.[32]

Japanese studies[33] have shown that sudden death at coition usually occurs under situations of extramarital sex, indicating the psychological forces may be more important than physiological responses in this outcome.

There may be conflict between the individual's desire to reassert his masculine role and his fear of injury from the physical demands of intercourse. In turn, the wife is often unwilling to assert her own sexual needs, preferring instead to deny them, hoping to keep her husband safe.

It is important to health care professionals to be confident in their own sexuality in order to counsel and discuss sexual attitudes with the individual and his wife.

Group Activity

Support groups for individuals after myocardial infarction have been helpful in encouraging them to freely express their emotions, with emphasis placed on support and understanding rather than confrontation or encounter techniques.

Bilodeau[26] and Rahe[21] found that during the first three meetings, most individuals continued to struggle to understand the nature of their illness and its implications. As Rahe[21] describes, they performed a psychological postmortem on the myocardial infarction. They often wished to graphically describe, and compare with their colleagues, their course in the hospital, and the name, type, color, number, and dosage of their medication. Both investigators found it helpful to take group time to deliver this medical information. However, when such information is transmitted in a series of lectures during and after hospitalization, valuable group time can be spared. Many individuals displayed interest, but many misconceptions, about nutrition. Most considered smoking to be a direct cause for a second myocardial infarction. As group sessions continued, individuals were able to discuss psychological reactions and their readiness to resume previous life patterns. All individuals admitted to a decreased libido and fear of death during intercourse. In Bilodeau's group,[26] not a single individual had asked his physician about sexual activity nor had any physician initiated this discussion.

Many acknowledged that they were more irritable and less tolerant of tension and noise. Most individuals stated that death came frequently to their mind, and many were certain that a second myocardial infarction was inevitable. Many individuals reported frustration, humiliation, and anger in what they considered family surveillance of their activities.

It was noted in both groups that the men often used humor, joking, slang, and profanity. While this may not be tolerated in another group situation, it was found by both therapists that it helped the men deal with the issues. As sessions continued, the individuals became more talkative, aggressive, developed a group cohesiveness, and often displayed a need to help others.

The results of such group support activities are impressive. The patients in Rahe's group[21] had a higher retention of cardiovascular knowledge than the control group. Gruen[34] found that when psychotherapy was initiated during the hospitalization period, patients had fewer days in the Intensive Care Unit in the hospital, with less incidence of supraventricular arrhythmias, congestive heart failure, weakness, depression, anxiety, and loss of vigor than patients in the control group.

Groups for Wives

Adsett[35] and Harding[36] found that in a group for spouses only, wives tended to be inhibited and quiet. They asked for more direction and structure within the group setting. Many felt guilty and did not express aggressive feelings. They talked about anxiety and depression, and reluctantly expressed anger regarding why they were "selected" to be in this position. They expressed a need to control their husband's behavior. They seemed unable to accept and discuss sexual and dependency needs, and described a lack of communication between themselves and their husbands. The groups did not become cohesive, as did those of their husbands.

The Later Phase of Rehabilitation

Preconscious anxiety can exist in the individual for several years after myocardial infarction. Memories can be rapidly mobilized by events which trigger association with the heart disorder.[35] When studied a year after myocardial infarction, only 26 of 65 patients were considered to have fully resumed their premorbid moods, attitudes, and relations within the home.[8]

Monteiro[37] interviewed men who had experienced a myocardial infarction 6 to 18 months prior, and found that 90 percent felt that people expected them to never be fully active again. Half of the men said that after a myocardial infarction a man can "never work like he used to," and many said that he should be considered "a sick person" for the rest of his life. This was in contradistinction to the attitudes of families and acquaintances of

persons with heart disease, who now held a much more liberal view about the allowable activity of the individual than they had earlier.

Croog[22] reviewed a group of men during their first year following myocardial infarction. Of those, 82 percent were working full time and 7 percent were working part time. Seventy percent reported that they had reduced their level of activity below premorbid levels and half reported that they were depressed either frequently or occasionally.

Wynn[38] reported that the most frequent cause of anxiety during this time was uncertainty regarding the safety of activity levels during vocational and avocational pursuits. Nagle[39] found anxiety and depression more frequent in those remaining home (55 percent) than in persons who successfully returned to work (11 percent).

Thus, it seems that, despite medical evidence that physical recovery of the individual is usually complete within three months,[24] the majority of individuals consider themselves impaired for at least a year after myocardial infarction.

Summary

The individual with myocardial infarction and his family continue to experience marked psychological adjustments to the illness up to a year or more following myocardial infarction. Emotional rehabilitation can be enhanced by a therapeutic approach which provides the individual and his family with an integrated program of supportive understanding and information.

An ideal program would include the following features. Immediately upon arrival in the Emergency Room, the individual's anxiety is diminished by supportive persons who reassure him and his family about his condition. His transport to the Coronary Care Unit is done by a member of the medical team, accompanied by the family members. A description of the CCU and its equipment begins before arrival in the Unit. Upon arrival, the therapeutic team can demonstrate the physical surroundings, and anticipate the questions that the individual and family may have regarding length of stay, activity, and visiting hours. Psychological care goals in the CCU are to provide the beginning of physical activity, to give emotional support, and to educate, in a concentrated effort to reassure the individual and restore his self-esteem. The transition from the Coronary Care Unit to the ward is stressful to both individual and family. This should be anticipated by the team through offering specific information and reassurance about the individual's progress. Treadmill testing in the late hospital period will add to the individual's understanding of his heart and give him confidence that he is capable of doing much more than he would have otherwise imagined. It is important for the team to initiate discussion of sexual activities, reassuring the individual that sexual activity will require no more energy expenditure than he has already experienced safely on his treadmill test. He should be taught to take his own heart rate, and to monitor his activity in the early days following discharge according to that parameter.

At discharge, the individual must understand that he will experience weakness and fatigue because of deconditioning in the hospital. He and his family should be offered formal counseling to deal with the altered family dynamics which have taken place during the hospitalization period, and which will further continue after the return home.

The early weeks following homecoming can be enriched with a series of community-based lectures which cover cardiopulmonary resuscitation, anatomy, physiology of the heart, as well as the psychological and physical reactions of individual and family in the early home phase. Because individuals and their families retain very little of the teaching done in the hospital, the period immediately after discharge is an optimal time to repeat and extend earlier education efforts. Appropriate diet and physical activity schedules can be presented again. Follow-up visits to the physician should be scheduled as frequently as possible during the early weeks after hospital discharge. If the physician is truly too busy to find time to talk to the individual, a nurse or other team member should answer his questions. Support groups are helpful in allowing both individuals and wives to share their feelings and to learn that they are not alone in their fears and anxieties. Marital groups are even more effective than separate groups for men and women.

A physical training program is important for the psychological health of the individual after myocardial infarction. His self-confidence is

enhanced when he sees others who have successfully resumed their premorbid physical activity level.

At all levels of convalescence, the physician needs to be aware of the needs of the individual and his family, to continually reevaluate these needs, and to foster an understanding among the family of the physical and psychological dynamics. Written guidance for both the individual and family will minimize misunderstanding.

When an integrated approach of lectures, support groups, and physical training programs is taken, the rehabilitation of the person experiencing myocardial infarction will be optimal. He will then be better able to resume his work and, most especially, his place within the family setting.

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