# Patient Reactions to the Diagnosis of Asymptomatic Coronary Artery Disease

## Implications for the Primary Physician and Consultant Cardiologist

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**The diagnosis of asymptomatic coronary artery disease is increasing as a result of the widespread use of noninvasive screening techniques. Because its natural history is unknown and as there is continuing controversy over proper treatment, both primary physicians and consultant cardiologists are often unsure how to approach patients with this disorder. This uncertainty on the part of physicians, combined with the paradox of having serious heart disease without symptoms, often leads to psychologic stress in patients and their families. In a pilot study to evaluate the psychologic impact of the diagnosis of asymptomatic coronary artery disease, we elicited the reactions from 15 patients with either totally or partially asymptomatic coronary artery disease. In general, patients and spouses were surprised and concerned by the diagnosis, but most felt their physicians had been supportive in explaining the problem to them. Because patients trusted their physicians, they often changed their lifestyles markedly in regard to exercise and diet; some even underwent coronary surgery when it was recommended. Public awareness of the disorder was generally felt to be almost nonexistent. This pilot study provides insight into a subgroup of patients with potentially serious psychologic problems and the implications of these problems for their physicians.**

Many physicians are aware that patients with coronary artery disease have a great deal of anxiety concerning their lives. This is especially true if they have sustained a myocardial infarction, an experience that reminds them quite dramatically that they are not immortal. After the infarction, and especially if the patient is still symptomatic, he or she may react with depression, anger or fear. These patients feel that the ability to control their health and lives has been taken from them; they are victims of a chronic disease for which there is no "cure," only a series of palliative measures of one type or another. Although some information is available on the psychosocial adjustments of these patients, nothing is known of the reactions of patients with asymptomatic coronary artery disease, that is, severe coronary lesions producing ischemia but not angina. Increasing numbers of such patients are being diagnosed as a result of noninvasive screening techniques. How should the primary physician and consultant cardiologist approach such patients? What kind of reaction can they expect when the diagnosis is explained? What are the implications of this reaction for future management? These are some of the issues that prompted us to undertake the present study.

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## Methods

**Patient questionnaire.** In order to evaluate the psychologic impact of asymptomatic coronary artery disease, we used a questionnaire (Table 1) dealing with patient reaction to the diagnosis. This questionnaire was equally useful in direct interviews or by mail responses (1).

**Study patients.** Fifteen patients with either totally (six patients), or partially (nine patients) asymptomatic coronary artery disease were evaluated. Totally asymptomatic patients demonstrated severe coronary artery lesions at angiography and ischemia on exercise testing (type 1 using our prior classification [2]), but had no history of angina or its equivalents. Partially asymptomatic patients were those who became totally asymptomatic after a myocardial infarction (type 2B using our prior classification [2]), but demonstrated silent myocardial ischemia (3) on exercise testing. Ten patients were interviewed in person and five responded to the questionnaire in writing. Of the patients, 12 were men and 3 were women. Their age range was 43 to 73 years. All but one had children. All the men were still employed, two part-time; one woman was working.

The patients who were interviewed in person traveled as far as 60 miles to our interviewing office. All but one was accompanied



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**Table 1.** Patient Questionnaire

1. When was the diagnosis made?
2. How was it presented to you?
3. Could it have been done differently?
4. How did you feel when you learned about the diagnosis? Fear? Sadness? Anger? Other emotions?
5. What was your spouse's reaction?
6. What was your children's reaction?
7. Do you regularly exercise?
8. If so, what kind?
9. Has the pattern changed?
10. Has your sex life changed?
11. What were the doctor's suggestions to you about how to live your life after he told you the diagnosis?
12. Have you in fact done anything differently because of the diagnosis?
13. Would you consider taking medication for an indefinite period of time?
14. Would you consider having surgery?
15. Do you think the public should be more aware of the problem of asymptomatic coronary artery disease?

by family, and family members were invited to sit in on the interview. After the patient had answered the questions, the family were permitted to add any thoughts or feelings of their own.

## Results

**Patient reactions.** All 15 patients who participated in the study were surprised to learn of their diagnosis. Those who were totally asymptomatic (type 1) found it especially difficult to believe the diagnosis. Ten patients manifested fear concerning their future and that of their family as the predominant reaction, three experienced anger, two sadness. The diagnoses were made in many different settings and circumstances for the 15 patients. The circumstances ranged from learning of the diagnosis from a consulting cardiologist who was largely unfamiliar to the patient to the warm and caring atmosphere of their primary physician. Four of the patients (two type 1, two type 2B) were overwhelmed by the way they were told. They felt that this staggering news was presented harshly and without empathy. However, 11 other patients felt that the doctors' approach was supportive. In general, type 1 patients were more surprised by the diagnosis because they had no symptoms and the diagnosis had been suggested first by exercise electrocardiography (with or without a radioisotopic procedure) and confirmed by coronary angiography. However, even type 2B patients (who had a prior myocardial infarction) were surprised to learn that their disease was active and ongoing, especially when they appeared to have made an uneventful recovery from their infarction and were then symptom-free.

**Family reactions.** In general, the reaction of the spouses of our patients was fear and concern, but without panic. One patient, however, said that his spouse was "surprised and afraid. At first she was very considerate, but that soon wore off as I started to do more things and nothing happened to me." Another totally asymptomatic patient spoke of his wife's anger, anger that emanated from fear that "history was about to repeat itself." (Her father had five myocardial infarctions.) The children's reactions were similar to those of their parents but more modulated. One suspects that in the case of children, concern was shown to the patient, whereas fear was internalized.

**Recommended treatment and patient response.** After learning of the diagnosis, most patients began an exercise program consisting mainly of walking, but interestingly, those patients who had previously done rigorous exercise stopped. Six patients spoke of changing their eating habits by cutting down on salt and cholesterol and trying to lose weight. Four respondents said that their sex life had become less active. They were not sure whether this was a reaction caused by the disease, the medication or the fear that both partners felt.

As one would suspect, the advice our patients received from their primary physician was to try to avoid stress, work less, participate in a moderate exercise program, stop smoking and avoid salt and fat in their diet. Most patients adhered to their physician's advice. Furthermore, if indicated, all the patients took the required medications and those who had surgery recommended to them underwent the procedure. In other words, the patients did not challenge the recommendations of their physicians. Because each patient had experienced severe but asymptomatic heart disease, they were particularly concerned that the public be made more aware of a disease syndrome that few knew about. They felt it would be helpful if more people were aware of this disorder, both as a public safety measure and to understand the feelings of patients with the syndrome.

## Discussion

**Interplay between emotional factors and coronary artery disease.** Most of the published data dealing with the interplay between emotional factors and coronary artery disease can be grouped into four distinct areas: 1) the role of stress, personality traits, life crises and so forth as risk factors for the development of coronary artery disease (4); 2) the effect of emotional upheaval—with its corresponding neurohormonal stimulation leading to increased myocardial oxygen demand and greater vasomotor tone—as a cause of angina (5); 3) psychologic problems associated with coronary care unit or surgical intensive care unit settings for myocardial infarction or coronary bypass surgery, respectively (6,7); and 4) psychosocial adjustment (attitude, work and sex habits) as part of the rehabilitation process after myocardial infarction or coronary bypass surgery (8,9).

Although attention has been directed to what can be simply called "living with angina" (10), as far as we know there are no data available on the psychosocial adjustments of asymptomatic persons with coronary artery disease. This

study may be regarded as the pilot study for an even larger and more extensive series of investigations that will be undertaken in the near future.

**Patient reaction to the diagnosis.** In this initial study of patients with asymptomatic coronary artery disease, we noted several trends. First, and not unexpectedly, utter surprise was the most common initial reaction to the diagnosis. After initial surprise, fear became a dominant response. How could someone who felt so well have, or still have in the case of type 2B (2) patients, a potentially life-threatening problem? Second, we were pleased by the compassion shown by most of the doctors, many of whom were themselves unsure of the ramifications of the diagnosis. On the whole, patients were satisfied with their physician's approach. Third, we noted the desire of the patients to do something "different" in their lifestyle to avoid possible complications of the disease. This desire resulted in the paradox of those who had exercised before stopping their exercise and those who had led sedentary lives beginning to exercise. Finally, there was a general consensus that there is little public information available concerning this syndrome and that more awareness is necessary.

*What are the implications of these findings for the primary physician and consultant cardiologist?* It is important for physicians to be aware of how the patient and his or her family are coping and to determine whether their reactions to the diagnosis are within the normal span; if not, they should suggest individual or family counseling. In our studies of patients with asymptomatic coronary artery disease, we have found that there is a broad specturm of individual reactions to the disease. At one end of the spectrum is the patient who is preoccupied with death, making sure that whatever he actively engages in does not adversely affect his heart. At the other end is the patient who denies that he has any cardiovascular disease, thus constantly testing himself, his family and his physician; he will do everything in an extreme manner. The patient's family also reacts in many different ways to the diagnosis. In family systems, the way in which disease is handled often reflects how the family functions psychodynamically, as well as any psychopathology in the relations within the family.

**Responsibilities of the physician for therapy.** It is often very frightening for the patient and the family to face the fact that the major breadwinner has a potential life-threatening disease that is "silent." Thus, it may be very difficult for an asymptomatic patient who is smoking or overweight to modify his or her self-indulgence and self-destructive behavior. It is easy to deny having the disease when among one's anxieties is the knowledge transmitted by the physician that little is known of the natural history of the disease or what is the best treatment. Physicians may, therefore, find that this type of patient wants and needs more time, more understanding and more detailed description of the disease, its prognosis and the prescribed therapeutic regimen than does the "conventional" patient with coronary artery disease. The family of the asymptomatic patient also needs special time. One way of helping to ease the family's anxiety is to explain to them how asymptomatic disease is different, yet at the same time does exhibit common features of the usual and symptomatic forms of coronary artery disease. A discussion of why the anginal sensation is protective (3) and why patients without symptoms should be especially careful about avoiding situations where they may be overstressed or overexerted would be helpful. That one has to cease an activity despite the lack of symptoms can be a hard concept for both the patient and family to accept. Because choice of therapy is difficult in this syndrome, the patient's own thoughts and desires must be elicited to avoid further anxiety. Psychologic counseling may be helpful if the physician senses that the patient and the family are excessively anxious, just as would be the case for patients with symptomatic coronary artery disease.

*In conclusion,* patients with asymptomatic coronary artery disease routinely have fears and anxieties concerning their lifestyle. Both patient and family may react to the knowledge of the disease by denying it entirely, by total overprotection or by some stance in between. Physicians must be more available to this type of patient and family to present the unique aspects of asymptomatic disease. Unfortunately, physicians may have to be very assertive in direction when, because of limited knowledge of this disease, they themselves may have as many questions as the patient concerning treatment.

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