Disability Among the Elderly After Myocardial Infarction: a 3-year follow-up

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In a previous survey, we used a self-administered postal questionnaire to determine the prevalence of psychological impairment and increase in the prevalence of disability among elderly patients three months after a proven myocardial infarction[1]. We now describe the prevalence of disability among the patients three years after their myocardial infarction.

Patients and Methods

The 100 patients who had been discharged from a geriatric ward of a Cardiff hospital after a proven myocardial infarction[1] were followed-up for three years. Forty-seven had died. Of the 53 survivors, 49 completed an interviewer-administered questionnaire in their own homes (4 had moved out of Cardiff). The interviews were conducted by a Health Visitor who had no previous knowledge of the patient and was unaware of the results of the previous surveys. Because of the good correlation between the responses to the questionnaire when self-administered and interviewer-administered[1], it was mailed to the four survivors who had left the area. Three of the four replied. The final number of completed questionnaires therefore represented a 98 per cent response from those able to reply.

The questionnaire was similar to that used in the previous survey and contained stem-questions covering important aspects of psychological well-being, difficulty in performing specified activities of daily living and limitations in performing household chores or social activities[1]. Elderly people do not all do the same household chores and social activities; in the previous survey it proved reliable to ask patients to estimate their limitations in household chores or social activities in terms of their pre-infarction state. Such a comparison in a re-survey after three years is not reliable and patients were therefore asked to assess the household chores or social activities they actually did as a proportion of those they would like to do. Other questions covered the reasons for being anxious or depressed, having difficulty with daily living activities, or having limitations in performing household chores or social activities. Points were assigned to the different degrees of disability and psychological impairment.

Results

Demographic Data

Of the survivors, 29 were men and 23 were women. The mean age was 79 with a range from 69 to 88. Of the 52 survivors, 9 had suffered a further myocardial infarction and 2 a stroke.

Disability

The mean score of the 52 survivors was 16.4, with a range from 3 to 25. The mean score of the women (14.0) was lower than that of the men (18.2). Those survivors who had had a further myocardial infarction or a stroke did not have a significantly lower mean score (16.0) than the rest of the survivors (16.6).

The frequency of the various responses to the questions are shown in Tables 1 to 4. Of the 52 patients, 20 had assessed their progress since their myocardial infarction.

Table 1. Psychological impairment among patients 3 years after discharge.

| Degree of anxiety               | No. of patients | Three months | Three years |
|---------------------------------|-----------------|--------------|-------------|
| Very anxious                    | 1 (2%)          | 1 (2%)       |
| Anxious                         | 7 (15%)         | 7 (13%)      |
| Fairly anxious                  | 16 (31%)        | 17 (33%)     |
| Not anxious                     | 24 (46%)        | 26 (50%)     |
| Not answered                    | 4 (8%)          | 1 (2%)       |

| Frequency of depression          | No. of patients | Three months | Three years |
|---------------------------------|-----------------|--------------|-------------|
| Always                          | 1 (2%)          | 1 (2%)       |
| Often                           | 6 (12%)         | 6 (12%)      |
| Sometimes                       | 8 (15%)         | 9 (17%)      |
| Never                           | 33 (64%)        | 35 (67%)     |
| Not answered                    | 4 (8%)          | 1 (2%)       |

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Table 2. Mobility of patients 3 months and 3 years after discharge.

| Mobility                  | No. of patients |
|---------------------------|-----------------|
|                           | Three months    | Three years   |
| Confined to bed           | 0               | 0             |
| Confined to chair         | 0               | 0             |
| Walking with difficulty   | 11 (21%)        | 13 (25%)      |
| Walking                   | 37 (71%)        | 39 (75%)      |
| Not answered              | 4 (8%)          | 8 (16%)       |
| Distance on flat          |                 |               |
| Less than 100 yards       | 13 (25%)        | 16 (31%)      |
| More than 100 yards       | 35 (67%)        | 36 (69%)      |
| Not answered              | 4 (8%)          | 8 (16%)       |
| Climbing stairs           |                 |               |
| Top                       | 37 (71%)        | 31 (60%)      |
| Three-quarters way        | 4 (8%)          | 2 (4%)        |
| Half                      | 2 (4%)          | 8 (16%)       |
| One-quarter way           | 1 (2%)          | 2 (4%)        |
| Unable                    | 4 (8%)          | 9 (17%)       |
| Not answered              | 4 (8%)          | 8 (16%)       |

Table 3. Proportion of household chores and social activities done 3 years after discharge.

| Household chores | No. of patients |
|------------------|-----------------|
| All chores       | 15 (29%)        |
| Three-quarters   | 4 (8%)          |
| Half             | 10 (19%)        |
| One-quarter      | 6 (12%)         |
| None             | 17 (33%)        |
| Social activities|                 |
| All social activities | 21 (40%) |
| Three-quarters   | 1 (2%)          |
| Half             | 2 (4%)          |
| One-quarter      | 3 (6%)          |
| None             | 25 (48%)        |

Table 4. Reasons for being unable to walk more than 100 yards on flat, climb 14 steps and do all household chores or social activities.

| Symptom                      | Walking on flat | Climbing stairs | Doing household chores | Doing social activities |
|------------------------------|-----------------|-----------------|------------------------|------------------------|
| Dyspnoea                     | 14              | 15              | 18                     | 19                     |
| Chest pain                   | 9               | 4               | 8                      | 9                      |
| Fatigue                      | 9               | 4               | 12                     | 13                     |
| Pain in joints               | 4               | 1               | 0                      | 2                      |
| Calf pain                    | 6               | 1               | 0                      | 2                      |
| Weakness/paralysis of limbs  | 2               | 0               | 2                      | 3                      |
| Other                        | 2               | 2               | 6                      | 1                      |

as 'poor' or only 'fair'. About half the patients admitted to feelings of anxiety and a third to depression about having had a myocardial infarction. The proportion of the 52 survivors walking with difficulty, unable to walk more than 100 yards on the flat, and not able to climb to the top of their stairs had not decreased over the three years. Because of their health, about two-thirds of the survivors were unable to do the proportion of their household chores or social activities that they would like to do.

Discussion

In a comparison of patients disabled through cardiovascular disease with those disabled by other diseases, Gray found that a significantly larger proportion of the cardiovascular patients expressed attitudes of passive hopelessness and resignation to a life of dependency and incapacity[2]. Therefore, the long-term prognosis of patients who show evidence of psychological impairment and disability in the few months after a myocardial infarction...
infarction should be poor. Our results confirm that elderly patients who are disabled at three months after their myocardial infarction will, if they survive, make little or no progress towards their pre-infarction way of life. The prevalence of symptoms and drug usage also did not change over the three years. Other workers have found similar results among middle-aged patients[3,4].

Few patients were being seen in the out-patient clinic at the time of interview despite substantial and continuing psychological impairment and disability. As the pattern of psychological impairment and disability, as measured by our questionnaire at three months after myocardial infarction, appears to be fixed for the succeeding three years, the questionnaire could be used to identify patients who are in need of after-care. The questionnaire gave similar results when self-administered or interview-administered[1] and could therefore be mailed or handed to patients at the first follow-up clinic.

We reassert the conclusions of our previous paper that doctors should plan and evaluate after-care programmes for their elderly patients who are left psychologically impaired or more disabled after a myocardial infarction.

References
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