week. It must therefore be accepted that sexual intercourse is a common practice in this group of girls. Much of this sexual activity goes on with ineffective and intermittent contraceptive precautions. The failures to use contraceptives competently are all too often due to ignorance, embarrassment, fear of medical disapproval, and unpreparedness.

It is apparent from the large and forthcoming response to this inquiry that the present generation of students are very willing to discuss sexual topics at a serious level with anyone who shows concern or interest. Many are aware of the deficiencies in their knowledge and practice of contraception and want to remedy them.

The climate is ripe for giving unashamed publicity to the contraceptive services available and for their growth and development to meet a rising demand.

The study evolved from an idea of a final-year medical student, Miss Helen Taylor (now Dr. Helen Kirk) who was a partner with us in the planning and field work of the study.

We are grateful to the Mental Health Research Unit staff for much technical help; to Mrs. Linda Wilson for her innovative ideas; to Mr. Leslie Butler, the Editor of *Gaudie*, for his article urging co-operation with the study; to the president and past-president of the students' representative council and the senior members of the university who assisted in launching the project;

to the university administration for providing the address labels; to the department of obstetrics and gynaecology for assisting with the second round of the inquiry; and to Dr. Norma Robertson for valuable criticism of the drafts. Finally, thanks are due to the girls at the university who took part in the study.

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Clinical Problems

Rehabilitation after Cardiac Illness

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Summary

Though the total number of patients with cardiac illness referred to a work classification clinic was relatively small (57), the results obtained in terms of patients at work in the year after assessment is encouraging. It is suggested that a comparatively simple method can help in the rehabilitation of patients, often by removing minor anxieties, and by improving communication among the various agencies interested in the welfare and employment of the individual patient.

Introduction

It has become increasingly recognized that rehabilitation is an important aspect of the management of patients with cardiac disease. This is especially so in cases of coronary artery disease, where the onset is often sudden and dramatic, compared with other types of heart disease where the progression of symptoms is more gradual. Recent reports on coronary artery disease¹⁻³ suggest that 80% of survivors who are fit enough will return to

work within about six months of myocardial infarction. Most of these will return to their previous occupation perhaps with some minor alteration. This, however, leaves a formidable residue of patients who do not return to work for a variety of reasons, and it may be that six months is in general excessively long before returning to work.

Much of the pioneer work in attempts to elucidate this problem has been done by Hellerstein and Ford⁴ and by Goble, Adey, and Bullen.⁵ They have made use of the work classification clinic principle, where representatives of the disciplines concerned can interview, examine, assess, and discuss patients with cardiac illness and employ measures to help with their problem.

In March 1969 a work classification clinic was established at the Southern General Hospital, Glasgow, as part of the cardiological service of the hospital. This paper describes experience with the patients referred during the first year of the clinic's existence. Staffing consists of a physician with a special cardiological interest, a psychiatrist interested in the psychological aspects of cardiac illness, a medical social worker, and a disablement resettlement officer representing the local office of the Department of Employment. The resources of the hospital including radiological, electrocardiographic, psychological, and secretarial services are available and a liaison exists with the local industrial rehabilitation unit.

Method

Referrals to the clinic were sought from the cardiologists and all the consultant physicians in the hospital. They were invited to

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refer cardiac patients, especially those with ischaemic heart disease, who had a work problem. An important source of patients is the social services department, which after establishing with the consultant in charge that there is no objection, arranges for the patients to be seen at the clinic. Occasional cases were referred from other hospitals and one case by a local general practitioner. There was little delay between time of referral of the patient and his being seen at the clinic. On the patient's arrival the objectives of the clinic were explained and a full medical history was taken, with particular attention to exercise tolerance and degree of physical activity.

This was followed by a full physical examination, and unless a recent electrocardiogram and chest x-ray film were available these investigations were carried out. In some cases an ergometer test was arranged to assess exercise potential. After the physical examination the patient was interviewed by the psychiatrist, who was introduced as a specialist interested in the psychological problems created by heart trouble. He took a detailed psychiatric history and carried out a full clinical psychological examination. Sometimes the order of the medical and psychiatric interview was reversed for the sake of economy of time. The patient was then seen by the social worker, who took a full social report, including a statement of income and outstanding debts, and when necessary paid a visit to the patient's home and interviewed him with his family.

After seeing the social worker the patient was given certain psychological tests to perform while the physician, psychiatrist, social worker and disablement resettlement officer conferred. The patient was then interviewed by the assembled team and the disablement resettlement officer obtained any further information that he required. He was able to assess employment prospects against the background of information available to him and discuss them with the patient.

Results

Of the 57 patients (55 men, 2 women) seen at the clinic from March 1969 to March 1970 54 were referred from within the hospital, 2 came from another hospital, and 1 was referred by special arrangement with the patient's family doctor, who had heard of the interest which existed in this problem.

Thirty-five patients had sustained a myocardial infarction, nine were suffering from myocardial ischaemia, 11 had rheumatic heart disease, eight of whom had been operated on, one suffered from alcoholic cardiomyopathy, and one had congenital heart disease.

The social grade of the patients was classified according to the Registrar General's index.⁶ One was in social class II, 16 were in III, 19 were in IV, and 21 were in V.

Forty-three of the patients were married, nine were not married, four were widowed, and one was separated from his wife.

Occupation and Work Record.—Work was regarded as heavy in 31 cases and light in 22, and the remaining four patients were in sedentary occupations. Fifty-five patients had a good work record before the onset of illness. Only one person was regarded as having a bad work record and the other patient was a school-girl.

Duration of Unemployment.—Three of the patients were still at work when seen, 13 had been off work for less than three months, 12 had been off between three and six months, and seven between six and 12 months. Twelve patients had been off more than a year and nine had not worked for more than two years. One patient was still at school (Table I).

Premorbid Personality.—Forty-seven of the patients were thought to have a normal personality, six were cyclothymic, two were regarded as schizoid, and two were psychopathic.

Intelligence.—Forty-two were regarded as having average intelligence and 15 low intelligence.

Past Psychiatric History.—Forty-four patients had no pre-

TABLE I—Number of Patients Unemployed when first seen and Number who Returned to Work

	Months Unemployed				
	<3	3-6	-12	-24	>24
Total No. of patients:	13	12	7	12	9
No. with M.I.	8	8	6	7	5
No. with M.I. who returned to work	7	8	4	5	1

A schoolgirl and three other patients (one with M.I.) still at work are not included. M.I. = Myocardial infarction.

vious psychiatric history, but episodes of neurotic illness had occurred in seven and depressive illness in five, and one patient was alcoholic.

Reason for Work Difficulty.—In 22 cases physical symptoms were thought to have prevented a return to work. Twelve patients were not working because of psychological or personality factors. In eight a combination of physical, psychological, and environmental factors had made a return to work more difficult. In six patients the attitudes of the family, the family doctor, or the employer had been responsible for the difficulty encountered in returning to work. In five cases there had been insufficient communication between the patient, the general practitioner, and the hospital, resulting in a lack of direction to return to work.

Recommendations

A return to the same work was recommended for 16 patients. Of these 12 were successful in returning to work, one patient negotiated his own admission to a Government training centre but had not found employment at the time of writing, and another three patients remained unemployed. Four patients were recommended to return to the same work with instructions to modify it in some way to make it less arduous. Two of these went to work, one remained unemployed, and the other patient could not be traced.

Twenty patients were recommended to obtain work of a light nature; 15 of these were successful. Of the remaining five, the physical condition of one deteriorated to make him unfit for work, and another after a period at the hospital rehabilitation unit left the district and was not traced. The attitudes of a further patient were unrealistic with regard to the type of work which he should do and the wages which he should earn. He remained unemployed. The other patient was recommended to resume light work, but it was economically more advantageous for him and his family for the wife to go out to work and for the patient to stay at home to look after the house and their young child and at the same time to obtain unemployment benefits. This seemed a reasonable economic solution from the family's point of view.

Sixteen patients went to a rehabilitation centre, including the patient referred to above. Of these 11 found work of a full-time nature. One patient died. The spell at the rehabilitation centre for three patients was prematurely terminated for medical reasons, although in one case this was not related to the main disability. These three patients remained unemployed, as did the fourth patient discussed above.

TABLE II—Outcome of Recommendations made to the 57 Patients about Work

Recommendations	No. of Patients	Outcome
Return to same work	16	12 successful, 3 unsuccessful, 1 went for retraining
Return to same work with minor modification	4	2 Successful, 1 unsuccessful, 1 not traced
Obtain lighter work	20	15 Successful, 5 unsuccessful, See text
Rehabilitation unit or retraining establishment	15	11 employed, 3 unemployed, 1 died
Unemployable	2	Unemployed

Two patients were regarded initially as being unemployable and they remained unemployed. These results are summarized in Table II.

Altogether of the 57 patients seen 40 were in employment when reviewed one year after the initial visit to the clinic.

OUTCOME AFTER MYOCARDIAL INFARCTION

Out of 35 patients with a myocardial infarction nine did not return to work. Another three died at some time during the year without returning to work and two could not be traced. Of the 30 patients, therefore, for whom meaningful and reliable figures were available 21 returned to work. Further analysis shows that of those who did not return to work two had not worked for five and six years respectively. A further two patients had not worked for more than two years. Two patients had been put out of work between 12 and 24 months and two patients had been unemployed between six and 12 months. One patient had been unemployed for less than three months, and it was thought that the main barrier to his return to work was his unrealistic attitude. We found, therefore, that four of the five patients with myocardial infarction who had been off work for more than 24 months did not return to work. Of the seven patients who had been out of work between 12 and 24 months two did not return to work. Of the six patients off work between six and 12 months two did not return to work. All the patients who had been off work for between three and six months returned to work, and only one of the eight off work for less than three months when seen did not return to work. These figures illustrate the difficulty of returning to work after a long absence and are summarized in Table I.

Discussion

Attitudes towards work classification have varied in different parts of the world but a recent survey⁷ showed that only 13 hospitals in Britain have this type of service for their cardiac patients and that a high degree of opposition exists towards its widespread development. Undoubtedly the demands on staff time made by this type of approach are formidable, but these have to be measured against the results which can be achieved. Helander⁸ investigated the cost effectiveness of rehabilitation as a whole in Sweden and showed that considerable advantages can accrue to the national economy as a result of an effective rehabilitation programme.

There are many problems in the organization of a clinic such as has been described quite apart from the involvement of interested personnel. Success depends on the co-operation of colleagues, since in Great Britain not all patients with infarcts come under the care of the cardiologist and in hospital most will be managed by the general physician. Referral to a work classification clinic tends to be haphazard, and we saw in the period under discussion a comparatively small number of patients. We are sure that many more were eligible for referral during that time. Most of the cases were referred from physicians with a particular cardiological interest, and of the remainder most came from the social worker. The types of patients seen came mainly from social grades, III, IV, and V. Thirty-one had been engaged in work of a heavy nature. One patient came from the managerial level. Only one patient had a bad work record before the onset of his illness. Two patients were considered to have personality disorders. Fifteen were regarded as having low intelligence and 11 had a past history of psychiatric disturbance. The profile of the typical patient emerges of a hard-working man with normal personality and average intelligence and in social class III, IV, or V.

As a group, however, we have been dealing with a very difficult type of patient from the rehabilitation point of view—we have come to regard this as the cardiac equivalent of the Skid Row patient, in that all the patients had been referred because of

a work problem and 28 (almost half) had been off work for more than six months. We think that the longer a patient is off work the less likely is he to resume working, and this is confirmed by our figures. We believe that in general a man should return to the work to which he is accustomed provided that it is not manifestly unsuitable. We recommended this for 20 patients and of these 14 (70%) were successful in returning to work. Often some minor adjustment can be made to a job (with the co-operation of the employer) to change one which is apparently unsuitable to one which is suitable. Lack of success in return to work, particularly if inactivity is extended beyond six months, could be attributed to the group's low motivation. Our experience indicated that only a tiny proportion were work-shy, despite the usual difficulty that the working wage is only marginally superior to the benefits paid when off work.

The ready availability of an industrial rehabilitation unit has been of great value. We have used it in two ways. Firstly, to allow the patient to get into the habit of working again and, secondly, to permit the expert assessment of a man's ability to return to work or for retraining. We sent 12 patients to the local industrial rehabilitation unit; four were sent to reaccustom them to working conditions and eight for reassessment. A further four went to the unit with the objective of arranging retraining (one arranged his own admission).

Only two patients were regarded as unsuitable for any type of work. One of these was a patient whose mitral valve replacement gave a poor functional result and who was disturbed psychologically. The other was the only one in the series who was unfit for any type of work on purely physical grounds.

The psychological effect of working compared with being idle is difficult to measure but must be considerable. It is easier if the man is nearer the normal retiring age for him to accept that he may never return to work, but even then several men expressed resentment and frustration at their position. The problem of filling in their day was a difficult one. It is interesting that these patients as a group had singularly few hobbies, and the principal recreations before the infarction had been either watching football or drinking beer or both.

It must be stressed that the clinic was operating in a distressed area in that there was high unemployment during the period in question, reaching nearly 15%. It is understandable that industry should prefer a fit man, particularly for heavy work, and the knowledge that a man has suffered a heart attack makes the employer very wary of re-employing him. Employers should be reassured that work does not adversely affect prognosis after myocardial infarction. The liaison established by the disablement resettlement officer with local industry was a very important factor in operating the clinic as was his liaison with the local industrial rehabilitation unit.

No advanced techniques are required in running a clinic of this type. Some centres have developed exercise programmes, and this has a considerable effect in that patients have continued supervision, develop increased confidence in their physical ability, and benefit from group morale, which all combine to produce a more healthy adaptation to the illness. Possibly, also, mortality figures are improved as a result of an exercise programme.

A formal approach to the problem in the manner described has shown that fewer than half of the patients seen had significant physical symptoms which could have been a barrier to the resumption of working. More than half were unemployed because of a combination of psychological and environmental factors and minor physical symptoms or as a result of the attitudes and anxieties of immediate family, family doctor, or employer. A significant number (five) had not returned to work because of a reported failure of communication between hospital and practitioner and lack of a definite statement from the hospital concerning return to work.

We would like to thank Dr. G. Shaw for the interest he has shown in this Clinic, and all the physicians at the Southern General Hospital who referred patients. We express our gratitude to Miss

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Outside Europe

British Aid to Medical Schools in Developing Countries

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Summary

If the British allocation for overseas aid is increased more generous agreements could be made with host universities and with expatriate staff. It would greatly stimulate overseas service by specialist trainees if the professional colleges and the universities agreed that they would be willing to substitute in their training programmes a year or two of service in an overseas medical school for one or more of their orthodox appointments. Consideration might be given by the councils for postgraduate education to ways of facilitating service overseas by specialist trainees and young consultants. The suggestion of the Royal Commission for the expansion of departmental staff establishments and training pools requires that the temporary expatriate occupying a supernumerary post is absorbed into the establishment on his return. While this may be done now in individual cases by personal arrangement a national agreement between universities and the N.H.S. would be necessary for these secondments to be made on the large scale commensurate to the need.

For other returning young doctors not yet in specialist training schemes an assurance that applications for appointments by those who had worked in developing countries would receive favourable weighting, by both university and N.H.S. selection committees, would be very helpful.

Introduction

In the past decade or so there has been diminishing enthusiasm in medical Britain for overseas aid. The growth of nationalism in developing countries, the economic difficulties in Britain, the competition for specialist posts, and the introduction of specialist

training programmes have been important factors in impeding the maintenance of the magnificent overseas traditions of British medicine. That the adventurous and generous spirit which inspired these traditions is not dying is shown by the success of the Voluntary Service Overseas organization and the eager enthusiasm of medical students who spend their elective periods in developing countries. There is some evidence that British medicine is now emerging from these constraints and that our medical schools, despite the difficulties I have mentioned, are taking a fresh look at the opportunities for providing overseas aid. There are indeed splendid opportunities for British medicine to maintain good reciprocal relations with the foreign and Commonwealth countries with which our medical ties have been close for so long.

What can be done to reduce the difficulties?

National Pride

We cannot abate the nationalist tide, and it is necessary to remember that even welcoming nationals would rather see their country doing business with equals than being the recipient of foreign generosity.

Affronts to national pride are likely to be reduced in the long term if the original agreements are made in a realistic though sympathetic spirit. National sentiment naturally inclines to promise a takeover of a project at an earlier date than appears probable to the dispassionate observer. The time for optimism and generosity should come later when the project is in rough water, as sometimes happens. The agreement should allow for a phased takeover of the project, whether it concerns one individual, a whole department, or a combined research and service project. The objective of any medical school in any developing country is the "naturalization" of all staff as rapidly as possible. Specialists in any medical discipline are a long time in the making. Fifteen to 20 years from the inception of a new medical school is the shortest possible interval to a complete takeover. Specialist training may reasonably be speeded up in developing countries, for there is surely an acceptable compromise to be found between the overnight creation of specialists plucked from the inchoate and undifferentiated mass of graduates and the measured progress towards the complete professional practised in developed countries.

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