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REHABILITATING A DIALYSIS PATIENT

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End-stage renal disease (ESRD) patients undergoing dialysis face much stress and have to make adjustments in their lives. To optimize health and improve quality of life, rehabilitation of renal patients is a necessity. Renal rehabilitation includes physical, social, psychological, and vocational elements. We established a renal rehabilitation program—including predialysis education, in-center training, and community rehabilitation—in our regional dialysis unit. The program is organized by a multidisciplinary team of health professionals with the help of a renal-patient support group. A patient who joined the rehabilitation program showed significant lifestyle change.

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End-stage renal disease (ESRD) imposes lifetime stress on patients. They must make a considerable effort to accept organ failure, to adjust their lifestyles, and to learn an unfamiliar technique required to sustain life. In addressing the various needs of our dialysis patients, our objectives are not only to prolong life, but also to improve the quality of life. Hence, an integrated rehabilitation program is essential in helping patients to live with dialysis.

WHAT IS RENAL REHABILITATION?

In the past, reemployment was the main indicator of successful renal rehabilitation (1). Today, the average age of patients joining the program is becoming greater, and the concept of rehabilitation is changing. Renal rehabilitation now encompasses facilitation of a patient's self-care abilities and restoration of well-being. To optimize health and improve quality of life, rehabilitation of renal patients must include physical, social, psychological, and vocational elements. Renal rehabilitation programs should be established so that patients are motivated to become involved in improving their own quality of life.

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START OF RENAL REHABILITATION

Renal rehabilitation should commence before the onset of dialysis. An early start can help to maintain physical, social, and psychological status. The rate of job retention also increases (2). Needed information, counseling, and encouragement are all given during outpatient visits. Predialysis education programs should involve health professionals from various disciplines, and the program should provide adequate information to patients who face a decision regarding dialysis. During the program, patients can share their problems and worries with other patients who are having similar problems. Patient-to-patient interactions of that type, under the guidance of professionals, are helpful in adjusting to, and accepting, dialysis. Patients have the assurance that they are not alone in facing dialysis.

APPROACH TO RENAL REHABILITATION

A renal rehabilitation program should center on the patients, with contributions from the patients themselves as well as from a multidisciplinary team. The multidisciplinary team approach produces positive patient outcomes by broadening the knowledge base in the program. Broad knowledge is necessary if patients are to withstand the stress of coping with ESRD and are to be motivated to continue their involvement in the rehabilitation process.

Each discipline intervenes at a different stage, contributing professional advice and playing a role tailored to patient needs. The attitudes of the team members affect one another (3). According to the Life Options Rehabilitation Advisory Council (4), staff encouragement of patients has been vital in the patients' perseverance and in the ultimate success of all rehabilitative efforts in many dialysis facilities. The key to a successful rehabilitation program is to create a positive and caring environment in which

patients and staff members alike feel comfortable and willing to be involved. Patients are considered partners in the rehabilitation process.

IMPORTANCE OF EXERCISE

Regular exercise is important for renal patients, because most have multiple comorbidities, and some are deconditioned on presentation. Regular exercise has health benefits ranging from increased functional capacity to reduced risk for cardiac disease (5). In addition, patients may also benefit psychologically. Depression and anxiety—two predominant symptoms in dialysis—may be alleviated (6).

Exercise programs and physiotherapy can be implemented as in-center, outpatient-based, or community-based programs—in any combination. All patients should be encouraged to engage in regular exercise and to take part in activities so that they can enjoy life and friendship with others.

RENAL REHABILITATION AT UNITED CHRISTIAN HOSPITAL

In the renal unit at United Christian Hospital, renal rehabilitation commences at the predialysis stage. During clinic visits, in preparing patients to accept renal replacement therapy, we discuss the importance of maintaining good physical and psychosocial health. Patients are encouraged to face ESRD positively and to maintain a healthy and active lifestyle.

Patients are invited to attend our predialysis education program when their creatinine clearance is approaching 15 mL/min or less. Various health disciplines from the hospital are involved. Facts about living with ESRD and about the various dialysis modalities and dietary adjustments are discussed. The importance of exercise for maintaining physical health is reinforced by our physiotherapists. Our medical social workers mobilize resources and handle adjustment counseling. The renal nurse clinic and the dietetics clinic, which run in parallel with the renal clinic, provide information, education, counseling, nursing, and dietary advice so that patients can cope better with their renal disease and with dialysis.

In 1997, we found that patients who attended our predialysis education program achieved better acceptance of continuous ambulatory peritoneal dialysis (CAPD). That acceptance was reflected in fewer refusals of dialysis (12/41 vs 47/85, $p < 0.05$) and fewer defaults in follow-up (1/41 vs 15/85, $p < 0.05$). Also, no patient required emergency dialysis, and all required fewer intermittent peritoneal dialysis sessions (2.9 vs 5.4, $p < 0.05$) before training for automated peritoneal dialysis (APD) or CAPD.

Patients requiring in-hospital treatment are encouraged to remain mobile. The necessary forms of exercise are determined by the physiotherapists according to the needs of the patients, from muscle strengthening to mobility training.

After insertion of the Tenckhoff catheter, and before the break-in stage, patients are encouraged to explore the problems involved in living with ESRD, to care for themselves, to arrange adequate nutrition, and to exercise.

During training in the peritoneal dialysis technique, the flexibility of the dialysis schedule is emphasized. Patients are encouraged to make adjustments in their dialysis schedules to cope with an active lifestyle.

After training, patients are invited to the Patient Sharing Program, where, under the guidance of nursing staff and medical social workers, they can share with other patients their experiences in coping with dialysis. The program is also a venue for new and old peritoneal dialysis patients to get to know one another and to recruit the new patients into the Patient Support Group and the rehabilitation programs.

An effective patient support group is the cornerstone for building a selection of patient rehabilitation activities (7). Our patient support group, the Hong Ling Renal Club, organizes activities that cater to the varying interests of the patients, thereby encouraging them to be physically and socially active. In 2002, they organized weekly gateball and table-tennis practices, spring dinner gatherings, a mid-autumn gathering, a golf practice session, short-mat bowls sessions, social dance sessions, badminton sessions, and an overnight camping trip.

To facilitate better rehabilitation, our dialysis patients are invited to join the Community Rehabilitation Program. We allocate our patients to 1 of 6 groups according to home address. Each group practices stretching exercises in the form of Tai Chi in public areas near their homes at least three times weekly in the morning. A leadership-training course was organized for key members of each group. Renal staff and community nurses motivate patients to join the groups and periodically pay regular visits to the patients at the rehabilitation sites.

After a period of regular exercise practice, friendships are often established, and gradually satellite mutual support groups form. In addition to the regular Tai Chi exercise, patients organize other activities such as lunch gatherings ("yum-cha"), home visits, mah-jongg, hiking, cruises, gateball, table tennis, and badminton.

OUTCOMES ANALYSIS

We review patient outcomes regularly. After 3 years, we measured the "6-minute walk," patient satisfaction,

hospitalization rate, exit-site infection rate, and peritonitis rate among three groups of patients: regular participants, infrequent participants, and patients who refused to join the rehabilitation program.

In the "regular participants" group, we observed improvement in physical capacity and fewer hospital admissions even though peritonitis rates were similar between the groups. Moreover, regular participants felt satisfied with the program. They made more friends among their fellow patients, and they engaged in more group activities. More than half of the patients in that group wanted to volunteer to help other ESRD patients.

CASE REVIEW

A 37-year-old woman with diabetic nephropathy on CAPD had a significant change in her attitude toward life after joining our Community Rehabilitation Program. For performing CAPD, she used a device to accommodate poor visual acuity. She had quit her job, because she felt that she could never be a piano teacher again. She was always accompanied by her mother because she had lost confidence in herself, and she was frequently admitted to hospital for minor complaints.

On introduction to the Community Rehabilitation Program, this patient was deliberately "elected" leader of a group. She took up the role as leader gradually, eventually resuming her self-confidence and no longer requiring the company of her mother during activities. She resumed her job as a piano teacher. In addition to caring for herself, she began to care for other group members, gave them support, and paid visits to, or telephoned, members of her group who were sick or unwell. She became the most popular group leader among all the groups. Unfortunately, she passed away from complications soon after a cadaveric renal transplant. Her death had a significant impact on the members of her group, and we had to arrange a group bereavement process for them.

This woman's story shows that rehabilitation programs can change a patient's attitude toward life. In addition to helping the patient cope with the stress of kidney failure and dialysis, well-organized rehabilitation programs can mobilize a patient's potential so that she or he becomes the key person in the helping process. Successful rehabilitation programs require the collaboration of multidisciplinary professionals to motivate and empower patients to optimize their health status and improve their quality of life. Patients are encouraged to take the initiative and to become actively involved in their own rehabilitation.

CONCLUSIONS

Rehabilitation is essential for dialysis patients to cope with daily life. A multidisciplinary approach with the assistance of a patient support group can help patients overcome barriers to rehabilitation. The most important factor is the initiative and involvement of the patients themselves. The development of coping skills and more positive attitudes can lead to a better lifestyle and continued employment.

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