Home Rehabilitation*1

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Introduction

There has been a general tendency to shorten the duration of hospitalization, and the focus when restarting home care is placed on disease control and management. Consequently, the support for home care patients (hereafter referred to as the subjects) in terms of assisting their everyday life has become insufficient. Home rehabilitation is one of the supportive tools that allow the continuation of care in a familiar living environment. The aim of home rehabilitation is to resume the subject's "activity," improve the quality of life (QOL), reduce the burden on caregivers, and prevent the manifestation of new disabilities by assisting with what the subject desires to do.

How to Proceed with Home Rehabilitation

Rehabilitation is a medical technology regimen to manage "disabilities." The WHO (2001) defines the term *disability* as all that make one's life difficult to live, stating that very comprehensive approach should be adopted to examine and resolve all issues caused by such difficulties including the limitation in activity and social restriction as well as private and environmental problems (Ueda 2005).[1] All knowledge and skill that can improve the subject's QOL is rehabilitation, and rehabilitation is applicable to all cases of home care.

It is important to send someone and prepare something active in the subject's environment to be incorporated in the subject's "activity" as soon as any change in his/her living functions is found out. A subject who is recently discharged from a hospital or other health institution after an acute illness requires greater caution since the subject is facing a major change in environment. In the case of the elderly, uncomplicated reasons could reduce their living function, for example, simple events such as almost falling over or staying in bed for a few days.

In home rehabilitation, the key to maintain their living function lies in the ability to take a "sitting position." The posture and the duration of the sitting position should be evaluated. A subject may be able to take advantage of outpatient services if he/she can safely stay in a sitting position in a chair with a back support, e.g., a wheelchair, for more than 30 minutes. Staying in a sitting position can stimulate a subject's mental activity and reduce the burden on his/her caregivers.

There are 2 types of community services. One involves home-visit rehabilitation by the rehabilitation specialists that is offered as a personalized therapy, and the other involves daycare rehabilitation that is offered as a group therapy. Those interested in using home-visit rehabilitaion are advised to consult a Care Manager. The service is available under the national long-term care insurance. However, a Care Manager may need to evaluate the services that the subject is already receiving due to the restriction in the fee schedule under the national health insurance policy. Once the issue of the fee restriction is resolved, a standard Patient Referral Document will serve as the source of information for prescribing rehabilitation. Information regarding medical risks is essential to prescribing rehabilitation. Nevertheless, the document can

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be comprehensive in nature such that it incorporates the goals set for the subject that have been discussed and agreed among the subject/caregivers and other experts in home care and rehabilitation including a Care Manager.

What Can Be Achieved

Case of a cancer patient

Case: An 83-year-old male, who suffered cerebral infarction that caused right hemiplegia after right lung cancer surgery and developed prostate cancer with thoracic and lumbar vertebral metastases.

History: The subject's lower lobe of the lung was resected 3 years ago during the right lung cancer surgery, but a part of the lesion remained. As for his activity of daily living (ADL), he spent his life independently and walked with a cane, and he was receiving treatment on an outpatient basis by visiting a hospital alone. On March 8, he suddenly started to slur, and right hemiplegia appeared. He was diagnosed with cerebral infarction and hospitalized. The metastatic bone lesions were later confirmed, and a biopsy revealed that his prostate cancer had metastasized to the thoracic and lumbar vertebrae. He was discharged from the hospital and returned home on April 24 since he could not be transferred to a specialized rehabilitation hospital because of his cancer.

On April 30, his family called the author's office with a request for home rehabilitation for hemiplegia. The grip strength (right/left) was 18.9/16.0 kg. He required help to move to an upright position. His Long-term Care Need was identified as level 3. He lived with his wife and a daughter's family, in a family with a total of 6 members. He regularly used diapers and required his daughter's assistance for defecation. His appetite increased after being discharged from the hospital, and the irregular schedule of his defecation made the excretion care difficult. Transferring to/from a wheelchair required 2 or more nurses when he was an inpatient. In-hospital evaluation for bathing was not conduced because he did not take a bath during a hospitalization. As for future care, no home nursing plan had been made, and there was no specific physician involved for house calls yet. He only had an appointment with an urologist in May. When the author examined him, his blood pressure was recorded at 135/62 mmHg and his pulse was 102 beats per minute. The subject reported no symptoms in particular.

"I want to go outside," he said. It was deemed necessary to prepare the environment in which the subject can safely assume the wheelchair position, so we started regular visits twice a week. Upon identifying contraindicative movements due to bone metastasis with the original hospital, a method to safely transfer the subject to a wheelchair was investigated, and the training was carried out to practice waking up and improve sitting tolerance. Some medication management methods were also proposed to control the regularity of the excretion schedule. On May 14, he received his first bathing service, which marked the end of our intervention for improving his everyday life at the moment, so we referred the subject to a home nursing station (where physical therapists were on duty).

Discussion: This is a case of an elderly with cancer who developed cerebral infarction, as well as another cancer with bone metastasis that were found during his hospitalization. Although he was not ready to be discharged from the hospital, we valued his desire to go out and were able to successfully and timely intervene mainly by setting up an environment that can reduce the burden of caregivers. When medical problems are expected to occur, a home rehabilitation may intervene only during the introductory part of home care. The author often requests a home nursing station to provide follow-up visits after that.

Case of a dementia patient

Case: An 82-year-old man who suffers from dementia with post-falling syndrome.

History: The subject has been suffering from dementia for 2 years, and his range of activities has been gradually reduced. He fell from a bicycle in February and has been falling repeatedly since. On March 16, he suddenly became unable to move and received an MRI and other tests at a nearby hospital for possible brain damage, but none was found. Both knee joints began to show extension angle limitations, and he had to start crawling to move around indoors. He applied for the long-term care insurance service in April, and was identified as having level 2 for the Long-term Care Need. In October, home rehabilitation was requested because it became too difficult for

caregivers to assist in his bathing. Daycare service was not an option since the patient strongly opposed to this and strongly verbalized his desire to go home. His daughter and her husband used to live with him but have moved out because he started to frequently exhibit ill-mannered attitudes (e.g., hurling abuse). The wife was now acting as the caregiver for all his needs.

The grip strength (right/left) was 6/16 kg (note: he was right-handed). He appeared to be at the level 4 in the manual muscle test. As for the basic movements, he was capable of independently waking up and rolling over, but required assistance to stand up and hold an upright position due to his limitation in the extension angle in his knee joints. His short-term memory was markedly reduced, and he could not control his emotions. The author also occasionally observed that he would raise his voice at his wife during the examinations. He particularly showed strong interest in meals, frequently commenting "It's almost a meal time" or "Is it ready?" He apparently spent almost all of his time sitting in front of the television when he was not eating. His wife's fatigue was evident, so a regular home visit once a week was started in order to reduce her burden.

The author suggested lying on his stomach to address the knee joint extension angle limitation, and he immediately did so without any resistance. He could maintain his focus for over 40 minutes when playing *Shogi* [Japanese chess], which had been his hobby. Then, we tried going for a walk. We had been informed that it would be difficult to go outdoors unless his wife was accompanying him; however, we managed to take him to a park. He spent some time there, apparently enjoying watching children who were playing. He started to yell once the children were gone, saying that he wanted to go back now. He became unstable around 12:00 and 17:00 unless his wife was with him since he was concerned about his meals, so rehabilitation and training were scheduled during other hours. The training in the prone position continued. After 2 months, he voluntarily started to say "Let's go to a park, everyone." We started to bring him to a small-scale multi-functional facility on a trial basis since he could now go out with 3 nurses without his wife. After several months, although he could still only eat at home, the wife's burden was dramatically reduced since he could use the said facility 3 times a week between the hours of 13:00 and 17:00, and home rehabilitation visits were terminated in May of the following year.

Discussion: Functional training specialists intervened to change the rhythm in the subject's everyday life while monitoring his conditions and responses. This was a case where the use of a day care facility reduced the burden of caregivers in stages. Day care facilities have a significant role to play in providing continued home care, just as home rehabilitation does.

Case of a disuse syndrome patient

Case: An 81-year-old male who had post-ileus disuse syndrome and right hemiplegia due to previously suffered cerebral hemorrhage and the right hip and femoral neck fracture post-operation.

History: The subject suffered right hip osteoarthritis 50 years ago, cerebral hemorrhage with right hemiplegia and the right femoral neck fracture 22 years ago, and a repeated right femoral neck fracture 10 years ago. Because of repeated injuries, there was a 10-cm difference in length between his right and left limbs. He was able to walk indoors up to a certain degree by wearing an ankle foot orthosis with plantar flexion support and the extension for leg length discrepancy, using a quad cane. His wife had suffered polio and had a physical disability certificate (the level 1, which is most severe in Japan), so the best she could do was to take care of herself. He had an appetite loss from January but recovered naturally, so he had been under observation. In July, however, he could no longer walk, and he was hospitalized in August 30. Detailed examinations revealed no significant finding, and he was discharged on September 11. At home, he could no longer use the restroom alone. He started to soil the rooms, so his wife asked for home rehabilitation. She hoped that he would become capable of using the restroom safety and cleanly again.

During home visits, he had no problem in communication and was cooperative. He had his bed set at the lowest setting, and he would lie in his bed at an angle. He was capable of waking up on his own and could sit upright. As for meals, he would slide down from the bed and ingest only liquid diet using his left hand without any assistance; he was not having any solid food at all. He used adult diapers and a urinal. When something had gone wrong, he would request periodical or on-call home care visits.

As a first step, we became involved in his excretion and eating. He had a concern about the risk of increasing her burden of care. However, the more he tried, the more he failed in using a toilet, which apparently added to her stress. There seemed to be some emotional friction between the couple. We introduced a wheelchair, changed where he would eat a meal, and made modifications for easier use the toilet. After his movements to/from a wheelchair became stable and his wheelchair tolerance in a sitting position improved, walking training was introduced at his request. The brace that he had been using for over 10 years had a fitting problem, so we explored social resources, reproduced the leg brace, and provided walking training. As his living function started to show signs of improvement, the marital relationship also improved. He vomited after 6 months and was hospitalized. He was diagnosed with gallstone and gastric ulcer and is currently receiving treatment.

Discussion: This case concerns the subject who has a long medical history whose living functions would decrease from indirect factors such as the loss of appetite. After his hospitalization in late summer, his recovery was believed to be difficult since his condition further deteriorated. However, his functional recovery was confirmed after approximately 6 months of home rehabilitation. A timely intervention of rehabilitation therapists as the third party resulted in a positive mental effect, and the subject's conditions as well as the marital relationship improved.

Conclusion

The situations of people needing home care are highly variable. In case of the elderly, underlying geriatric syndrome and other factors further complicate the overall picture, making the understanding of their disabilities more complex. Our only available approach when a person has an illness that is difficult to treat is to eliminate multiple disabilities. All of the comprehensive efforts toward this goal are considered as rehabilitation. In home rehabilitation, the subject's residual abilities and potential capacities should be assessed, and this assessment will serve as the basis for re-establishing his/her activities. In particular, maintaining a sitting position is a key issue. For home care patients, it is important not only to find each subjects' stimuli and introduce them into the daily life and increase the number of times in training but also to watch affectionately and attend with sympathy. Those kind of approach would relieve a subject's sense of anxiety and provides motivation and a peace of mind. Home care staff who are not specialized in rehabilitation will more frequently encounter the subject, and they should remain attentive to the subject with the mind of rehabilitation.

A family physician, on the other hand, is in a position to prescribe professional rehabilitation service offered by rehabilitation specialists. Family physicians are expected to play an extended role as a practitioner of general medicine, as well as a coordinator for the long-term care service (Hotta & Liu 2010).[2]

References

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