An Approach to the Innovation of Rehabilitation Medicine and Its Progress

Takizawa, Shigeo. Inventor and Founder

The chief executive officer,
International Division of Biophilia Rehabilitation Academy

Summary

The acceptance of disability was an aspect of the rehabilitation medicine until today. It is different from the other extensive medical sciences in that it enables the preventions, medical treatments and diagnosis of disease and/or injury, while the name of medical science is crowned for its achievements as a whole.

Research from the multiple aspects related to rehabilitation medicine in our academy is being done in order to innovate enabling the disabled elderly to improve and restore their physical function even if their injured area of the brain makes it difficult to acquire complete recovery and to reconstruct it from the medical science that has tolerated the acceptance of their disabilities.

Our research related to the development of devices, actual results evaluation and predictions will be continued in the future and also some of those are presented today.

Introduction

According to the Japanese Welfare Ministry, the number of bedridden elderly who will require assistance for excretion, eating and changing clothes will be approximately 2.3 million in Japan by 2025 even if all of them were treated by rehabilitation medicine up until the present. Training meetings in Fujisawa City in 1987 had been started only for people who each of the doctors determined to be at an impairment level of 'not able to recover.' The Takizawa Method of Rehabilitation at the training meetings had enabled two patients to return to work. I had recognized the need for preventative care and rehabilitation in order to prevent the Aging Crisis.

Research

The Clinical Rehabilitation Research we had done is as follows:

(1) Rehabilitation effect in the geriatric hospital for the bedridden ¹)
(2) Rehabilitation Effect of Using Walkers with Caster Sleds ²)
(3) Rehabilitation Effect in the Geriatric Health Services Facility (GHSF from here after) ³)
(4) Statistical Evaluation for the Rehabilitation of GHSF ⁴)
(5) Result of At-home Rehabilitation ⁵)
(6) Supplementary Examination of Rehabilitation Execution ⁶)
(7) Research on Evaluation Method ⁷)
Researches for Mechanism of the Rehabilitation we are trying as follows;
(1) Evaluation device development with the information technology (IT) 8)
(2) Mechanism Verification of Rehabilitation by Randomized Control Test 9)
(3) Development of Devices and Proof of Rehabilitation Mechanism by Data Analysis 10)
Researches will be and are trying as follows;
(1) Mechanism Verification of Programmed Rehabilitation by the Molecular Genetics
   The predictable mechanism of our hypothesis is as follows:
   ○ The exercise for the nerve stem cells activation to the patient in the condition of
     impairment has the same outcome in both the motivative exercise of the Takizawa
     Program and the experiment with mice. More specifically, it enables the activation of
     the nerve stem cells.
   ○ The activated nerve stem cells enable the patients, who are in the impairment stage, to
     actualize synapse formation in their brain of affected side.
   ○ Reconstruction of neural transmission is implemented in realizing synapse formation,
     thereupon both excitable synapse and inhibitory synapse is balanced.
   ○ The adjustment between agonist, antagonist, and the muscle group for stability can be
     manipulated so that movement can be smoothly completed.
   We are expecting that the progress of genetic research will enable us to prove our
   hypothesis at the 2005 Conference in Berlin.
(2) Development of at-home rehabilitation device using IT.
(3) The Upper Limbs Training and Lift Dual Device.
(4) Trial of Local Biophilia Rehabilitation Network.
(5) Proposition to the Labor Law.

Conclusion
In the previous research and development, we clarified the way to improve one’s
condition from bedridden to re-acquired walking ability, through the Takizawa Method of
Rehabilitation, regardless of their level of disability or impairment. Our studies relating to
this rehabilitation enable the elderly to live an independent daily life with little care and/or
dependence on others.
   The results have an impact on;
(1) Physical and mental independence
(2) Expansion of occupations suitable for the healthy elderly
(3) International Joint Research
It has been dispassionately reported that the number of suicides has exceeded 30,000
people for each of the past 7 years in Japan. In the United States, public opinion is split in
regards to the Vietnam War, which lasted 8 years and resulted in 45,662 deaths of
American soldiers. Depression from the worries of life seems to be the cause of suicide.
Those numbers of suicides are much higher than numbers of people killed during Vietnam
War.
Worries about employment, pension, and medical insurance seem to make people think, “Getting old is no good.” They start to behave as a kamikaze, becoming reckless and self-destructive.

The motive of our research is to actualize, through the diffusion of Biophilia Rehabilitation, a society that can afford dignity to those who are elderly and disabled, allow people to become independent from care-reliance and at the same time, increase life expectancy to a healthy level for those who live to old age.

Such a society will be established by Biophilia (the mind of each person; the heart and/or will that motivates a person to achieve a long life even when they become handicapped.) Through the research of the Biophilia Rehabilitation Academy, motivative exercise (using devices and participating in physical exercise), following Takizawa Program (operation program of motivative exercise for elderly with disabilities in a sitting posture), and at-home care (at-home nursing care and meal guidance).

The diffusion of Biophilia Rehabilitation actualizes a society in which people can transition from care reliance to personal independence.

Reference
9) Mitsuyo Makita, MA, Professor, An Examination by Randomized Control Test of the Effectiveness of Exercise Therapy (Takizawa Program) on Bedridden Elderly Patients, Proc of The 3rd IBRC, pp. 37.