

Nourishment management of patients with Parkinson's disease with decubitus

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Abstract

Parkinson's disease is a progressive neurodegenerative disease. The patients are forced to lie in bed during the course of the disease. Therefore, decubitus occurs frequently. There has been little nutritional examination of decubitus development factors that has focused on this disorder. We approached as one of the decubitus measures of patients with disease nutritionally. The subjects were 90 hospitalized Parkinson's disease patients. Seven people had decubitus, and 83 people did not have decubitus. The biochemical index of the subjects was weighed. The serum concentration of total protein (TP) and Alb (albumin) was not significantly changed between the two groups. The body mass index (BMI) was 16.4 ± 1.77 in the decubitus group, 20.6 ± 3.85 in the non-decubitus group (P value 0.004). Serum concentration of TP increased from 6.4 to 7.8 g/dl after nutrient preparation use, but that of Alb was not obviously altered (from 3.6 to 3.5). The decubitus score, DESIGN-R was improved from 37 to 28. In the patients with normal serum TP, Alb, decubitus measures involving nutrition management are worth trying.

Keywords: Parkinson's disease, decubitus, nourishment management, body mass index, BMI

Introduction

Parkinson's disease is a progressive neurodegenerative disease, the patient is forced to lie in bed during the course of the disease. Therefore, the development of decubitus occurs frequently in Parkinson's disease, and a long time is needed for healing to take place. There has been little examination of how nutritional factors affect the development of decubitus. We questioned 90 hospitalized patients with Parkinson's disease. One case whose decubitus improved through nourishment management is reported.

Subjects and methods

The subjects were 90 Parkinson's disease patients that were hospitalized at Tokushima National Hospital. Seven of these patients had decubitus. The subjects were divided into two groups; a decubitus group and a non-decubitus group. The body mass index (BMI) and biochemical indexes including serum concentrations of total protein (TP), albumin (Alb) were compared in the two groups. Special nutrients and supplements which strengthened protein, Arg, Zn, vitamin C were given to the patients with decubitus.

Results

The TP was 6.9 ± 0.66 (g/dl)(mean \pm SD) in the decubitus group, and 6.6 ± 0.53 in the non-decubitus group ($P=0.21$). Alb was 3.6 ± 0.40 (g/dl)(mean \pm SD) in the decubitus group, and 3.8 ± 0.06 in the non-decubitus group ($P=0.06$). The BMI was 16.4 ± 1.77 in the decubitus group, and 20.6 ± 3.85 in the non-decubitus group ($P=0.004$).

Case report

The clinical course is shown in Figure 1. Isocal plus EX (1500kcal) was given from August 31, 2013. Isocal plus EX® and Renalen LP® (1750kcal, 71.5 g of protein) were given for increase of maintenance and the energy supplying of the renal function from January 31, 2014. The weight increased, but the BUN level and K-value increased subsequently. From April 15, the energy supply was lowered to 1450 kcal and protein was lowered to 56.5 g. The TP increased from 6.4 to 7.8. Alb did not obviously change (3.6 from 3.5). The DESIGN-R decubitus score improved from 37 to 28.

Discussion

Parkinson's disease (PD) is the second most common neurodegenerative disorder, with a life-time risk of two percent in men and 1.3 percent in women [1]. Although the disorder is generally slowly progressive, it does have a major impact on the disability and quality of life of affected patients [2,3]. One of the lesser studied aspects of PD is the spectrum of problems PD patients encounter once they are admitted to a hospital. In our own and others' experience, hospital admissions of PD patients are often problematic, especially when patients are admitted on non-neurological wards [4,5]. Problem areas are exact timing or lack of drug administration, administration of contra-indicated drugs, complications due to immobilization, and psychiatric disorders triggered by the hospital admission [6-8]. As

most non-neurologically educated health care personnel are unfamiliar with PD, protocols would be helpful to improve the care of PD patients in such environments.

When nutrient preparation was used for patients with Parkinson's disease with decubitus, Alb did not rise, but the DESIGN-R score improved. In the patients with normal serum TP, Alb, decubitus measures involving nutrition management are worth trying.

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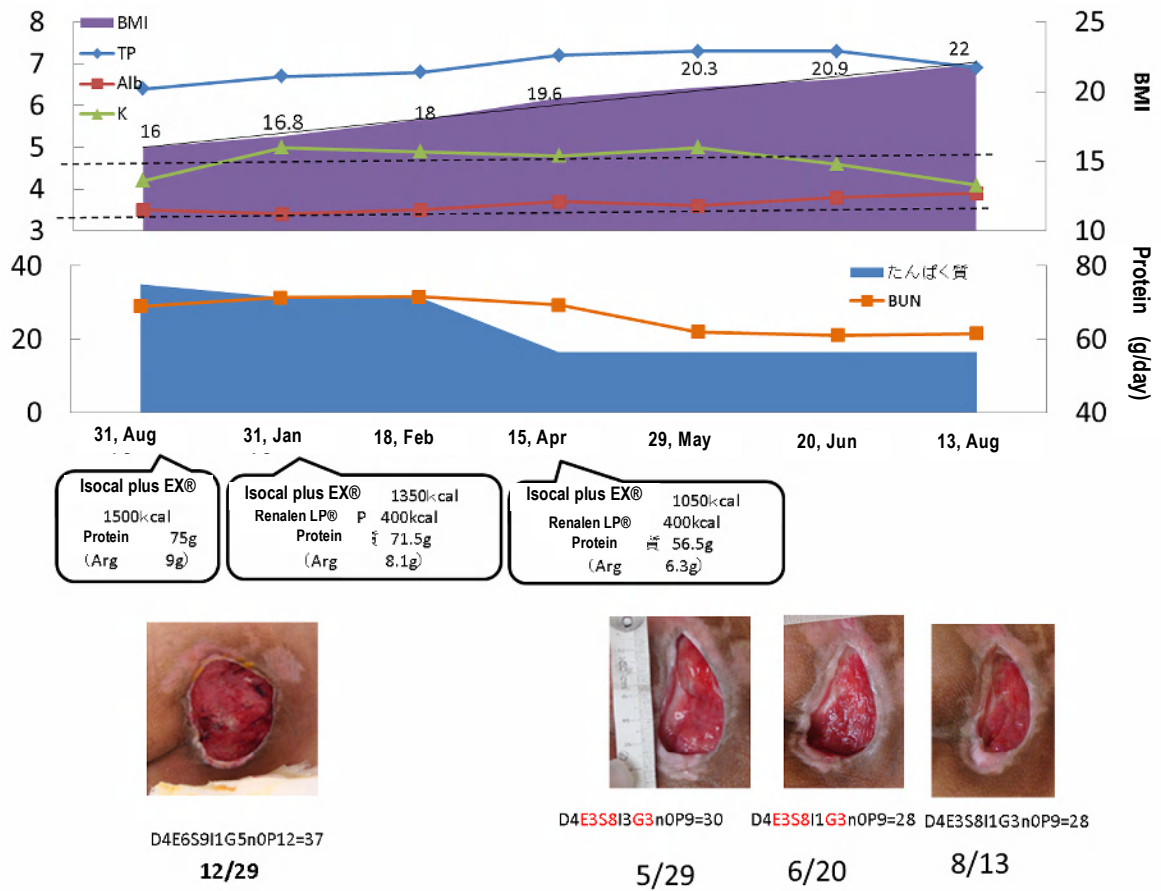


Figure 1. Clinical course of a patient with decubitus