

The need for insoluble dietary fiber in patients of the nutrient preparation transluminal for neuromuscular disorders

Risa Mizuta, N.D.^{#1}, Kenji Yamakita, N.D.^{#1}, Rieko Kondo, M.D.^{#2}, Tatsushi Miyazaki, M.D.^{#2}, Miho Saito, M.D.^{#2}

#1. Department of Nourishment management room of Tokushima National Hospital, National Hospital Organization, 1354 Shikiji, Kamojima, Yoshinogawa, Tokushima 776-8585 Japan

#2. Department of Neurology, Tokushima National Hospital, National Hospital Organization, 1354 Shikiji, Kamojima, Yoshinogawa, Tokushima 776-8585 Japan

Abstract

Because those with neuromuscular disorders cannot obtain enough nutrients with the progress of their illness, tube feeding is usually started. Complications of transluminal nutrient preparation include diarrhea and atonic constipation. We combined dietary fiber with a diet in a near ratio and examined the effect on the bowel movements of the patients.

We followed five patients with neuromuscular disorders who were undergoing lower tube feeding. We gave one dietary fiber processed food (Laficel) and observed the patient for three months. Laxative, cancellation or Daikenchuto reduction were two of five people, and Laficel was performed after administration. Two of three people who had no change of medicine became easy to get stool. There were no patients whose abdominal distension worsened after administration of treatment. It was thought to be useful for the bowel control of patients in the patients of the atonic constipation by tube feeding to use the DF of contents near a diet.

Introduction

Masticatory force and deglutition decrease in patients with neuromuscular disorders with progress of the illness. Tube feeding is started because they cannot obtain enough nutrients. The main complication associated with transluminal nutrient preparation is diarrhea. But the bowel movement of patients with neuromuscular disorders does

not rarely result in dyschezia badly. Most ingested dietary fibers (DF) are insoluble dietary fibers (IDF). We take in dietary fiber primarily from vegetables. As for the DF of the commercially available intubation nutrient preparations, most are composed only of water-soluble vegetable fiber (SDF) (Figure 1). We observed the defecation state of the patients using DF combined with a diet in a near ratio

Subjects and methods

For five tube-fed patients with neuromuscular disorders, we added one processed food containing dietary fiber (Laficel). We evaluated it, considering the impression of the patients and degree of the increase or decrease in need for laxatives. As for the Laficel, it contains IDF:SDF = 2:1. (Figure 2)

Results

Patient A, Property of the stool improved after use of Laficel.

Patient B, After Laficel initiation, bowel movement was enhanced.

Patient C, The patient felt that bowel movement improved after they started Laficel.

Patient D, After initiation, bowel movements improved, and laxatives were discontinued.

Patient E, The person did not feel many

changes.

Medicine reduction after the administration or the cancellation of treatment was seen in two of the five patients. Two of three people with no change of medicine found it easier to produce a stool. One remaining patient did not experience many changes.

Discussion

The SDF, which is a difficult to digest glucide soaks the stool with water through osmolar effects with oligosaccharide. Short chain fatty acids and gas are produced by enteric bacteria. The intestines become acidulous. Also, these become an energy source of the intestinal mucosa. IDF is not used by enteric bacteria and becomes a material in the stool. When the quantity of the stool increases, amount of stool increases.[1,2] Passage through the gastrointestinal tract when the amount of stool increases becomes faster [3] Because the neuromuscular disorders lead to poor bowel peristalsis, it is easy for atonic

constipation to occur. Adverse events such as abdominal distension did not result from using Laficel. Medicine reduction was carried out on two patients. It is difficult to evaluate the enteral environment objectively. It is thought to be useful to use the DF of contents near a diet in the patients with atonic constipation to maintain the quality of life of the patients.

References

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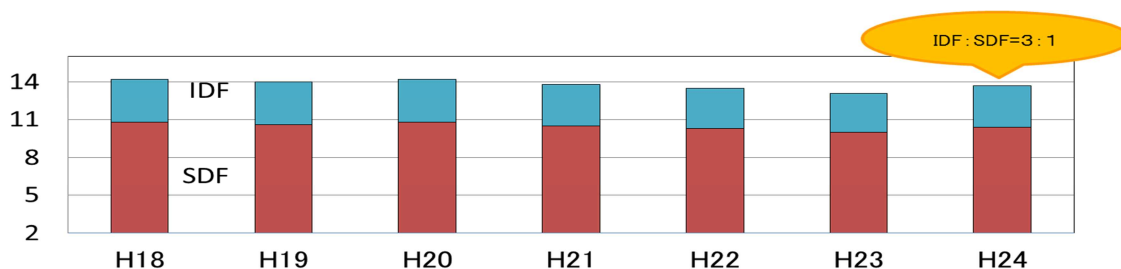


Figure 1. Daily dietary fiber intake of Japanese people

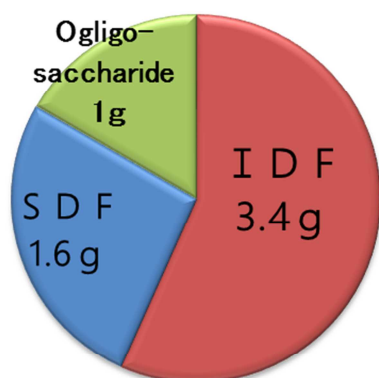


Figure 2. Contents of Laficel

