

Effect of finger pressure therapy to promote spontaneous evacuation in patients with progressive muscular dystrophy

Yumiko Nakayama, R.N., Kyoko Inada, R.N., Takako Oshima, R.N., Mayumi Kekio, R.N., Syoichi Maruo, R.N.

Department of Nursing, Tokushima National Hospital, National Hospital Organization, 1354 Shikiji, Kamojima, Yoshinogawa, Tokushima 776-8585 Japan

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Abstract

Muscular dystrophy patients often suffer with chronic constipation. We examined whether key point shiatsu as carried out in Oriental medicine could promote spontaneous evacuation. We practiced the finger-pressure treatment in six muscular dystrophy patients every day at the key point of "three foot villages" for one month. We observed bowel sound and the evacuation situation before and after the shiatsu acupressure therapy. There were two patients with whom spontaneous evacuation was seen without using an enema or a suppository. Three patients experienced decreased spontaneous evacuation. An increase of the bowel sound related to intestinal peristalsis after the shiatsu was found in all the patients. One cause of the defecation difficulty of muscular dystrophy patients is decreased abdominal pressure due to muscle weakness. This was connected by the key point shiatsu for promotion of spontaneous evacuation to enhance intestinal peristalsis campaign.

Key Words: Key point shiatsu, Constipation, Spontaneous evacuation, Muscular dystrophy

Introduction

Muscular dystrophy patients develop a decline in systemic muscular strength and a decline in momentum. Therefore, they have reduced abdominal pressure and peristalsis, and often become constipated. It is difficult to add abdominal pressure at the time of evacuation, because they usually perform excretion while lying down on a bed. They are worn out at every evacuation and it takes a long time to empty the bowels. The muscular dystrophy patients who are hospitalized at Tokushima Hospital often develop constipation and use enemas, suppositories, and laxatives. We wished to discover a method to reduce the frequency of these artificial aids a little. Oriental medicine has been reviewed recently. It has been popular for use in everyday life situations and medical institutions because there are no

side effects, and ordinary people can use the simple finger pressure therapy. A study by Fujiwara et al. [1] reported that promotion of peristalsis was found when performing abdominal key point shiatsu for patients with neuromuscular disorders. Also, a report by Kanno et al. linked key point shiatsu for elderly people with natural evacuation in a study on bowel control [2]. Three foot villages are famous as a key point that is effective in fatigue recovery. According to Oriental medicine, three channels leading to the stomach, the biliary tract and the bladder go from three foot villages. We can control digestion and excretion by stimulation of three foot villages and this also helps in recovery from fatigue. Based on these results, we performed shiatsu on three foot villages in the muscular dystrophy patients and studied whether we could promote spontaneous evacuation.

Table 1 . Summary of Patients

| Patients | Disease | Age | Gender | Enema/ Suppository | Laxative |
|----------|---------|-----|--------|-------------------------------|----------|
| 1 | BMD | 80- | M | Enema (Occasionally) | + |
| 2 | BMD | 70- | M | Enema (daily) | + |
| 3 | BMD | 60- | M | Enema (Occasionally) | + |
| 4 | SPMA | 50- | M | Enema (Occasionally) | + |
| 5 | LG | 70- | F | Enema (Occasionally) | + |
| 6 | FSH | 40- | F | Suppository (Occasionally) | + |

BMD, Becker muscular dystrophy; SPMA, Spinal progressive muscular atrophy; LG, Limb-Girdle muscular dystrophy; FSH, Facio-scaplo-humeral muscular dystrophy

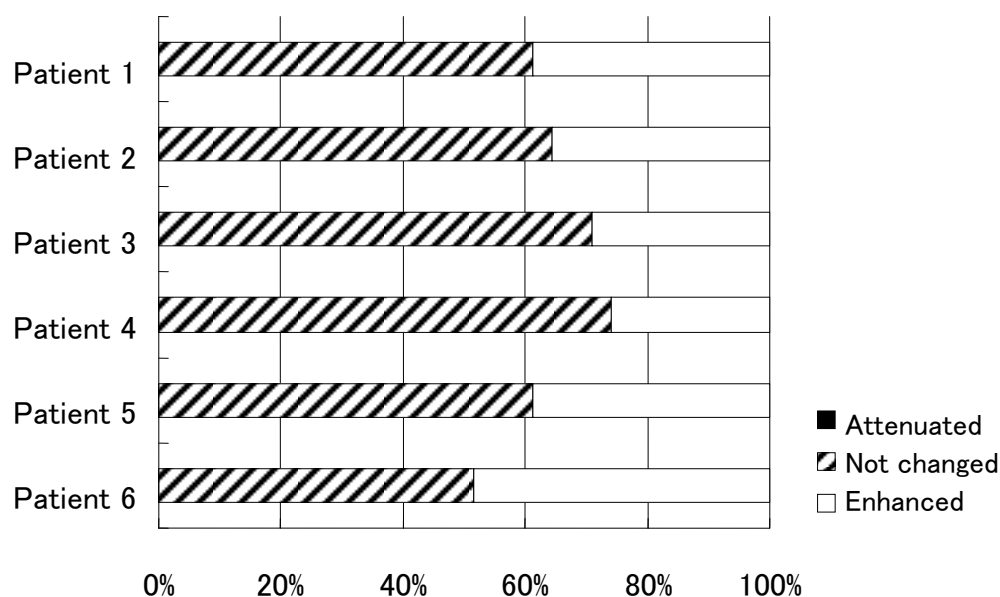


Figure 3. Change in the bowel sound before and after the shiatsu acupressure therapy. In all patients, the bowel sound was either enhanced or did not change after treatment.

Subjects and methods

The subjects were six muscular dystrophy patients admitted to Tokushima Hospital. All had constipation and used enemas,

suppositories, or laxatives. Also, they had the permission of the chief physician, and transmission of the intention of the person himself was possible, and a written agreement was obtained. An outline of the case is shown in table 1. We analyzed the evacuation situation for two months before this study and then for

two months afterwards. We filled in an evacuation check list detailing the evacuation situation of the subjects every day. The check items included the following six points; stool frequency, the number of times that an enema / suppository was used, the dose of the laxative, the quantity / properties of the stool, the sensation of inadequate defecation, and the presence or absence of defecation problems. A nurse receives the key point chiropractic treatment to patients in a supine state once a day in bed from 14:00 to 15:00. The treatment continued every day for one month. The shiatsu pressure was 3-5 kg. First, the nurse controls the lower limbs of the patients with her hands and fixes the maneuver. Then, the nurse gave the finger-pressure treatment using the other big finger of the hand at three foot villages of the patients for 3-5 seconds. After resting for 3-5 seconds, the next maneuver was performed. These maneuvers were repeated ten times. The method followed the method of Terasawa et al. [3]. Briefly, we gave the finger-pressure treatment at the position (three foot villages) for four fingers to a knee on the outside of the tibial leading edge (the shin). The nurse marked the skin with a magic marker to be sure to apply the finger-pressure treatment to the same part. All the nurses were trained to perform the same maneuver and could apply the shiatsu at a pressure of 3~5kg. The patients were asked if they experienced pain or discomfort during shiatsu. Also, we noted details on the key point shiatsu check list about any change in bowel sound related to the shiatsu. Just after the end of the shiatsu, the bowel sound was checked using a stethoscope on the abdominal region left side if before shiatsu. Because stagnation of the stool can occur easily between the transverse colon and the descending colon, the auscultatory part was chosen.

Results

During a key point shiatsu period, two patients (Patient 1 and Patient 4) did not have to use an enema / a suppository because spontaneous evacuation was possible, as shown in Figures 1 and 2. In three patients (patients 2, 5, and 6), spontaneous evacuation decreased, and enema / suppository use increased. There were two patients who had the number of times that bowel sound aggravated in key point shiatsu one month more than five times (patients 3 and 4). Figure 3 shows the change of the bowel sound before and after the shiatsu acupuncture therapy. There were four patients for whom bowel sound was aggravated more than ten

times (patients 1, 2, 5, and 6). Regarding the patients' impressions, four patients said the following after one month of the key point shiatsu use; "I feel that some stools are produced more easily", "Gas came to sell well", "A stomach came to move from the shiatsu next", and "It was comfortable". There was an opinion that "there was little change" from two people.

Discussion

As a result of key point shiatsu, the bowel sound was enhanced in all the patients. It is thought that the sthenia of the intestinal peristalsis campaign by key point shiatsu leads to promotion of spontaneous evacuation. Because constipation was always mild, in two patients (patients 1 and 4) who did not use an enema / laxative during this study, an enema was used for only at hope. Because they were very aware of emptying their bowels spontaneously, it was easy for them to be conscious of the effect of the key point stimulation, and it was possible for enema use to be decreased. On the other hand, patient 3 said that "gas appeared", but continued the enema once every two days. Patients 2, 5 and 6 had sthenia of the bowel sound more than ten times, but the ratio of enema / suppository use did not decrease. Their constipation was severe and they used an enema, suppository, or laxative in the long term. In other words, it is possible that they depended mentally on the medicine for evacuation. Therefore they may not have had the will to empty their bowels by themselves even if their intestinal peristalsis was enhanced. During the study period, bowel sound might have been enhanced in four patients (patients 2, 3, 5 and 6) for more than five days sequentially. During this time, it was possible to increase spontaneous evacuation if we performed abdominal massage or used an abdominal hot compress on the patients. In this study, there were two patients who did not use an enema or a suppository in spontaneous evacuation during the key point shiatsu period. Also, after the key point shiatsu, sthenia of the bowel sound was found in the six study patients. Unfortunately, in this study, there were only a few subjects. Furthermore, we were not able to unify disease, age, the conditions including the kind of enema / suppository / laxative. Also, information such as a fluid intake or the momentum of the patients was lacking. One only nurse conducted the observation of the bowel sound change related to the shiatsu. Therefore, these results are

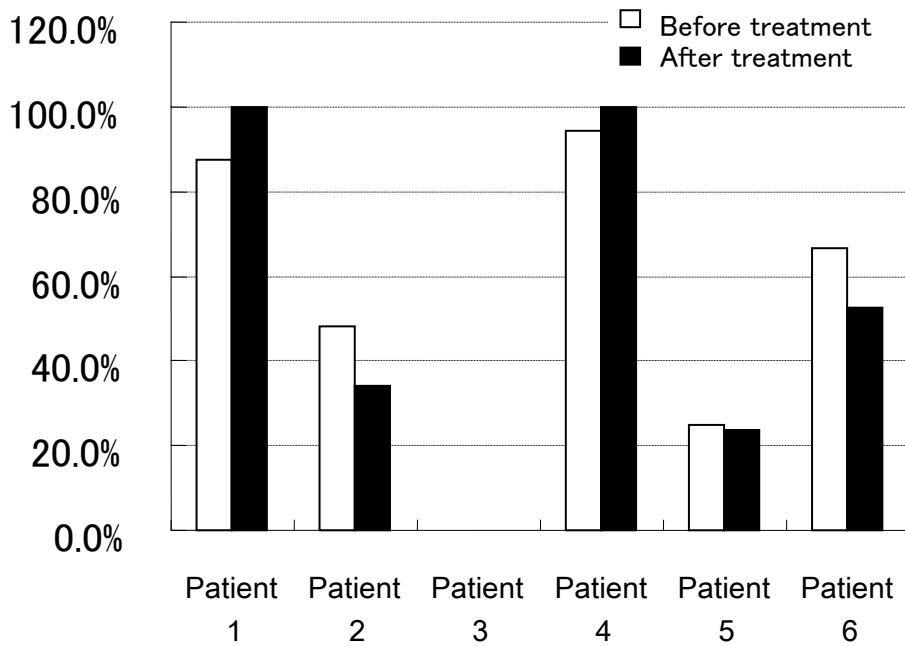


Figure 1 Ratio of spontaneous evacuation during finger pressure therapy

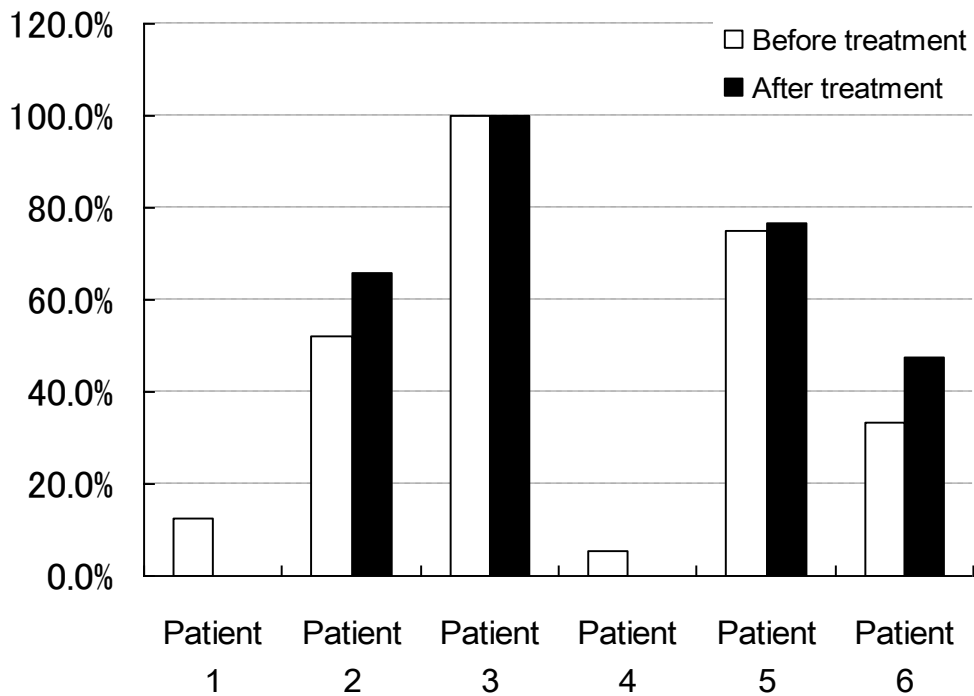


Figure 2. Ratio of enema or suppository use. The ratio was calculated by dividing the number of uses of an enema or a suppository by the total number of evacuations

preliminary, and it is difficult to give a definite conclusion.

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