

Support for skin problems related to the gastric fistula circumference of muscular dystrophy patients: effect of the sponge fixation

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Abstract

For skin problems related to gastric fistula circumference, the fixed effect of a gastric fistula catheter with a sponge was examined. The subjects were seven muscular dystrophy patients. This trial used a balloon type tube and was invalid for the bumper type button. It is necessary to change intervention according to the kind of gastric fistula catheter.

Keywords: support, skin problems, gastric fistula, muscular dystrophy, sponge fixation

Introduction

Approximately 80% of the patients on the A ward are muscular dystrophy patients. In such patients, deglutition becomes difficult as the disease progresses. Cases requiring gastrostomosis are often found. Among the muscular dystrophy patients on A ward, half already have a gastric fistula. Most of the patients on A ward lie in bed all day. The activities of daily living all require assistance. Patients cannot remedy pains and itching by themselves. Skin problems are harder to heal as compared with general patients. When a skin problem occurs in a gastrostomy site people in the gastric fistula enlargement patients, they are troubled by a feeling of pain and itching. Also, bacterial infection to be found in the fistula circumference may cause an abscess. The infection is easily aggravated, and fatal cases have been reported, too. Therefore, it is very important to prevent skin problem or to discover it early and treat it. In A ward, ointment, wound dressing, or Y gauze are currently used to treat skin problems of the gastric

fistula circumference. However, these measures are not effective, and we cost. The three main factors associated with skin problem are classified as follows: 1) Mechanical irritation. Stimulation such as pressure or friction from the gastric fistula catheter, and abrasions from adhesive tape detachment. 2) Chemical stimulus. Disinfectants, antimicrobial agents, and tape adhesives. 3) Infection. Candida dermatitis and follicles. Mechanical irritation, chemical stimulus, and infection are not the things that occur independently. These merge with the thing which we are associated with closely and are common. We hypothesized that overall skin problem might be improved by avoiding mechanical irritation. A method for achieving this is fixation of the gastric fistula catheter with sponges. We reported on the Okada [1-3] et al. as follows. When a gastric fistula catheter was fixed with a sponge, the granulation tissue was improved. To evaluate skin problems of the gastric fistula circumference, the "gastric fistula evaluation scale" was used. We depend on Nishiyama [4] et al. The skin problems were defined as

"redness, induration, rash, foam, sores, ulceration, or granulation tissue occurrence".

Methods

The subjects were nine muscular dystrophy patients hospitalized on A ward. They had skin problems related to gastric fistula circumference. The study period was November 17, 2013 to December 9, 2013 . On November 17, 2013, the person in charge distributed a manual to the study patients. It gave a summary of the study, and we had the patient sign a consent form. Assessment of the gastric fistula before the care enforcement was conducted on the same day, including "state of the leak", "waste material adhesion", and "state of the skin". We intervened from the next day. After intervention, it was evaluated on a stomach no hearing evaluation scale. The intervention was conducted using the following procedures for three weeks. 1) Polluted Y gauze was removed, and the gastric fistula circumference was washed with water, and a bed bath was carried out. 2) For the skin problem, ointment and wound dressing were

applied. 3) The Y gauze was sandwiched. 4) The sponge was sandwiched.

The size of the sponge was one size larger than that of the outside stopper. Excursion between the skin and the outside stopper was confirmed. The sponge was for exclusive use of an individual. The care procedure was publicized to all the staff. The care procedure was described in a document with photographs. A sponge made of urethane foam for washing-up was used. This type of sponge had the following advantages. 1) it has moderate elasticity, and is suitable for fixation. 2) it is cheap and easily available. 3) it can be used repeatedly, and is economical. 4) it is easy to process. The end-point included the degree of the leak, the degree of waste material adhesion and the state of the skin; redness, induration, rash, foam, sores, ulcers, and granulation tissue. From the intervention start, we conducted evaluations after three, seven, 14 and 21 days. We applied to the Ethical Review Board of Tokushima National Hospital for approval of the study contents, and this approval was obtained.

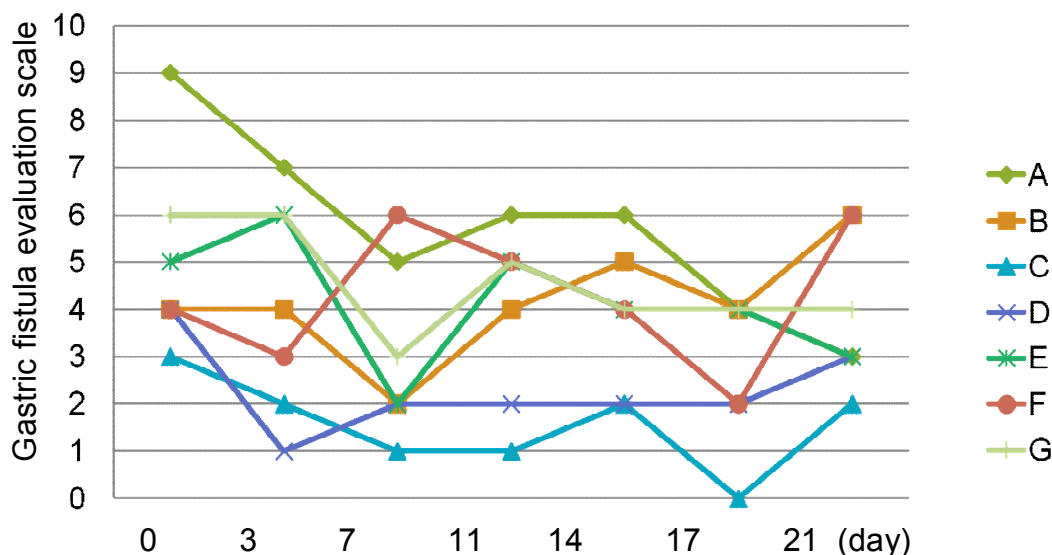


Figure 1. The change in gastric fistula state by the care intervention

Results

We obtained consent from eight of the nine patients. One person of those stopped on the way. The basic attributes of the subjects. All the subjects were men, and they were aged from 22 to 35. As for the kind of gastric fistula catheter, only patient A used balloon type tube 24Fr. The other seven people used the bumper type button 20Fr. The change in the gastric fistula state caused by the care intervention is shown in Figure 1. In patient A, leaks, redness, rash and granulation tissue were improved. In patient B, skin sores developed seven days later. Granulation tissue occurred 11 days later. Rash, sores and ulcers finally worsened. In patients C and D, excoriation disappeared due to care enforcement seven days later. In patient E, improvement was found in redness and induration of the skin and bulging. In patient F, the formation of the granulation tissue was found due to care enforcement seven days later. Twelve days later, no improvement in granulation tissue was found. No great change was found in patient G. The change of the stomach no hearing evaluation scale. When the gastric fistula evaluation scale total points for about the intervention were compared, five patients had improved, and two had worsened.

Discussion

Improvement was seen only in patient A, who used a balloon type tube. The balloon type tube has a long shaft head structurally, and pressure on skin easily appears. Therefore, it is thought that the fixation with the sponge may have been effective. The patients in whom aggravation was seen had a tendency towards abdominal fullness. The sponge fixation was not appropriate for these patients. The fixation of the gastric fistula catheter with the sponge is useful for the balloon type tube, but is unsuitable for the bumper type button. The change in the stomach no hearing evaluation scale total points did not show a significant difference. One reason may be the small number of cases.

The PEG catheters were of the following four kinds. 1) bumper type button, 2) bumper type tube, 3) balloon type button, and 4) balloon type tube. Because each has good and bad points, and adaptation is different, it is necessary to use a kit put together to the patients. Also, the effect on skin problems is different. It is necessary to change intervention according to the kind of gastric fistula catheter. Because the several staff cares, limits of the study include that it was difficult to measure the consistency of maneuver and the way of observation. The number of patients using the balloon type button has increased recently in A ward. There are patients with skin problems at the gastrostomy site. Therefore, we want to attempt care improvement in many patients, based on the results of this study, but using a process of making trial and error.

References

1. Shingo Okada. From a hospital to being at home from a hospital state-of-the-art of the PEG (gastric fistula) care (in Japanese), 2011, Syorinsya Co Ltd.
2. Shingo Okada. An easy-to-understand guide PEG care notebook. (in Japanese), 2010, Syorinsya Co Ltd.
3. Shingo Okada. A care question and answer of the gastric fistula (PEG). (in Japanese), 2008, Syorinsya Co Ltd.
4. Yorihiro Nishiyama, Shigeki Koyama. One step at the beginning of the gastric fistula (PEG) care. 2010. Hidekazu system Co Ltd.