

Awareness of patients and nurses of the risks of using respirator-equipped electric wheelchairs

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Abstract

We studied the awareness of patients and nurses of the risks of using respirator-equipped electric wheelchairs. For 22 patients and 64 nurses, a posttest investigation by the questionnaire method was conducted. The question paper included categories of "uneasiness", "awareness of risk", and "the explanation of the field of activities". It was proved that patients had a lower appreciation of the risk than nurses in all items. It is necessary that healthcare workers share their understanding and the recognition of the risk with the patients.

Key words : electric wheelchair, patients, nurses, questionnaire, uneasiness, awareness of risk, the explanation of the field of activities

Introduction

In muscular dystrophy, respiratory care has been actively provided since the late 1980s, and patients' lives have been extended remarkably. Noninvasive intermittent positive pressure ventilation therapy (NIPPV) has been introduced in our hospital. From the late 1990s, assistance to patients using respirator-equipped electric wheelchairs has been provided. For safety management, the range where the patients can travel freely alone is limited. When the patients have permission to go outside, a healthcare worker attends in all cases. However, some patients can be seen alone beyond permitted limits. We implemented this study to determine the patients' and

nurses' awareness of the risks of using respirator-equipped electric wheelchairs.

Materials and methods

The subjects were 22 hospitalized patients with progressive muscular dystrophy who used respirator-equipped electric wheelchairs, and 64 nurses on the ward duty. A question paper was produced containing three categories of "uneasiness", "awareness of risk", and "the explanation of the field of activities". The investigation period was from August 1, 2011 to October 5, 2010. The purpose of the study was explained to the subjects, and we

obtained their consent after receiving approval from the Tokushima National Hospital Ethical Review Board.

Results

For the 22 study patients, the questionnaire collection rate was 100%, and the effective response rate was 72.72% (n=16). For the 64 study nurses, the questionnaire collection rate was 89.06% (n=57), while the effective response rate was 100%. The patients were 19-46 years old. The patients had used a respirator-equipped electric wheelchair for 2-16 years. As for the nurses, the years of experience were from five months to 35 years. The muscular dystrophy ward experience of the nurses was from five months to 18 years. When the patients used respirator-equipped electric wheelchairs, 45-70% of the nurses were worried about problems with the respirator. Approximately 10-30% of the patients were uneasy. Regarding free behavior, 50-70% of the patients felt this was dangerous. However, 75-80% of the patients wanted to act freely. It was felt that more than 90% of nurses thought the behavior of the patients was dangerous. It was found that 20-40% of the nurses did not want the patients to act freely.

Discussion

The use of an electric wheelchair equipped with a respirator is an important activity of the patients [1]. Because daytime use of such wheelchairs has become common, it is thought that the patients' awareness of the risk may fade. The patients answered that they want to act freely, even though they realize that their behavior when using respirator-equipped electric wheelchairs is dangerous. Most of the nurses felt it was risky for patients to use a wheelchair on their own. Nurses were always concerned about problems with respirators. Therefore, they expect

the behavior in the eyeshot. To preserve security and the quality of life of the patients, it is important to establish an environment in which respirator-equipped electric wheelchairs can be used safely. It is necessary that healthcare workers share their understanding and the recognition of the risk with the patients.

References

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