



PROMOTION OF THE QUALITY OF DRUG EDUCATION FOR THE PATIENTS USING NASOGASTRIC TUBE FEEDING BEFORE DISCHARGE

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Background

There's more than three-fifths of prescription not suitable for crushing but crushed for medicine in the research from home care and medical institutions.¹⁻² To reduce incorrect pathway of taking medicine, we provided caregivers who could fully understand tube feeding knowledge and skill and use illustration to explain the correct pathway of taking medicine before the discharge of the hospital.

Goal

Improving caregivers in tube feeding knowledge and skill through providing illustrated materials for drug education in discharge planning service and then home care in order to achieve seamless pharmaceutical care.

Method

From October to December in 2018, study candidates were identified through screening information from the Hospital Information System (HIS) for tube-feeding. After excluding unable to communicate or illiterates, specific tube-feeding medication counseling was provided to caregivers. Questionnaire, made of 4 items about frequency of drug administration, identification of crushed medicine, obstruction of pipeline and risk of crushing while each item was given a score of 1 to 3, were filled out before and after the educational intervention. The study was conducted with approval Taipei City Hospital Research Ethics Committee (TCHIRB-10703101).

Result

A total of 40 tube feeding patients' caregivers were enrolled in the study with the average age of 56.6 years and 67.5% in women. 42.5% had lung infection in most patients. 47.5% of patients used tube feeding in this hospitalization for the first time (Table 1, Figure 1). The knowledge assessment of medication tube feeding (knowledge and skill) was significantly increased by before compared to after drug education (7.33±2.54 vs 9.78±1.99, $p < 0.001$) (Table 2).

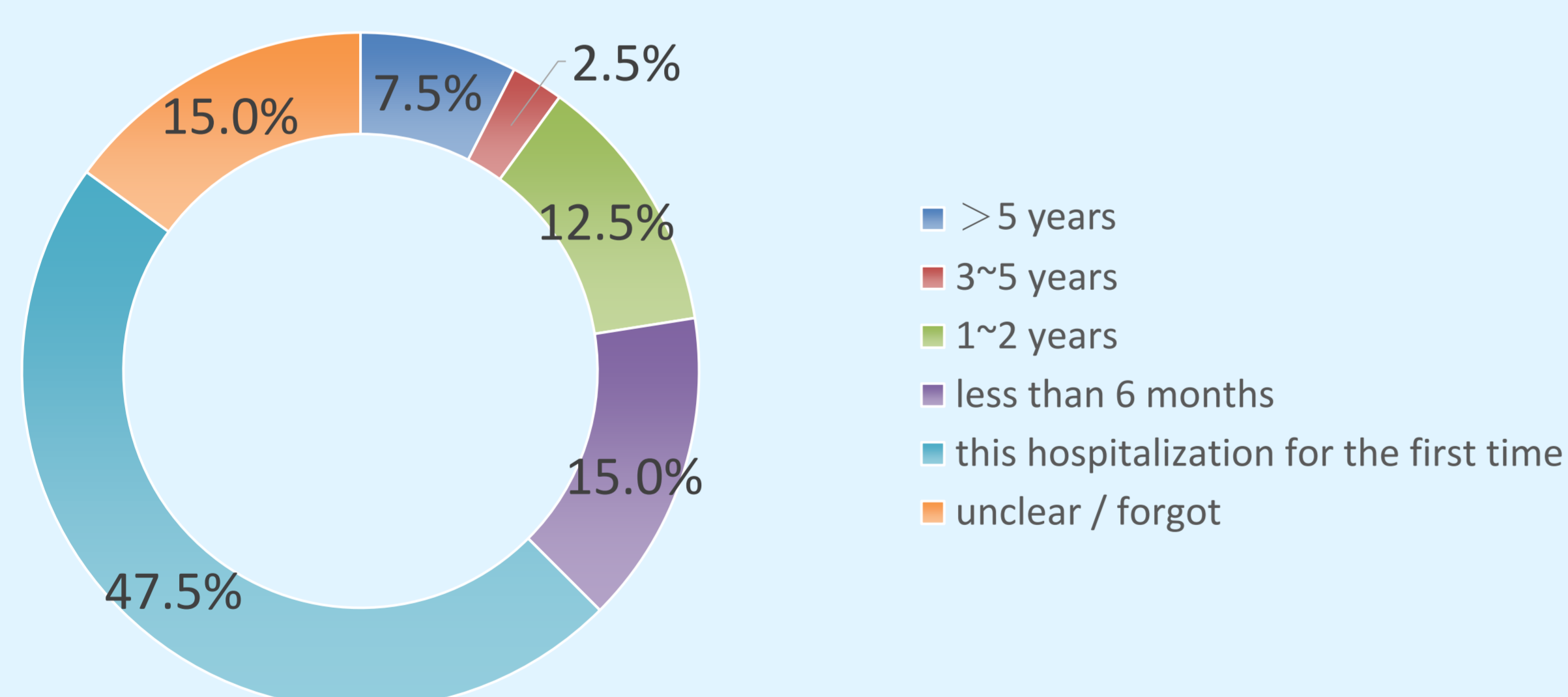


Figure 1. The time patient using tube feeding

Table 1. Demographics

Characteristic	n=40	%
Caregiver		
Gender		
Female	27	67.5%
Male	13	32.5%
Age (years, mean ± SD)	56.6 ± 8.7	
Education		
Elementary school	5	12.5%
Junior high school	8	20.0%
Senior high school	14	35.0%
College/University	10	25.0%
Higher than graduate school	3	7.5%
Relationship with patient		
Family member	29	72.5%
Other relative	11	27.5%
Ever been taught of tube feeding knowledge		
No	11	27.5%
Yes	29	72.5%
Patient		
Gender		
Female	22	55.0%
Male	18	45.0%
Age (years, mean ± SD)	81.0 ± 11.1	
Reasons of using tube feeding (multiple selection)		
Stroke	8	20.0%
Dementia	15	37.5%
Swallowing difficulty		
Ageing	11	27.5%
Other reasons	3	7.5%
Lung infection	17	42.5%
Postoperative prevention	1	2.5%
Miscellaneous	12	30.0%
Tube feeding times per day (mean ± SD)	5.4 ± 1.1	
Kinds of medicine per day (mean ± SD)	6.3 ± 3.1	

Conclusion

The data has indicated that illustration materials are good for patient education. We suggest that the tube feeding knowledge and skill should be widely used to increase the patients' drug safety and use correctly.

Reference

- Zhen Ru Chen, et al. A Preliminary Survey of Incompatibility of Pulverized Medications in Medical Wards. The Journal of Nursing 2003; 50(3): 71-76.
- Yao Wen Chang, et al. A Study Shows that Medications Should Not be Crushed in Elderly Home Care Patients with Nasogastric Tubes. Taiwan Journal of Family Medicine. 2009; 19(1): 36-48

Table 2. Responses to the pre- and post-educational program questionnaire (n=40)

Variable	Pre-test		Post-test		Mean Difference	t score
	Mean	SD	Mean	SD		
How many times you need to take medicine? (times, before / after meal)	2.33	0.76	2.58	0.50	0.25	2.236*
Do you know how to identify what kind of the medicine needs pharmacist to ensure to make powder?	1.75	0.81	2.28	0.75	0.53	3.787**
Do you know how to avoid the tube obstruction?	1.83	0.78	2.63	0.49	0.80	6.150**
Do you know the medicine to make the powder may have the risk?	1.43	0.71	2.30	0.65	0.88	7.656**
Total score	7.33	2.54	9.78	1.99	2.45	5.934**

* $p < 0.05$ ** $p < 0.001$

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