INTERNAL FACTORS AFFECTING LENGTH OF STAY
STROKE PATIENT IN HOSPITAL

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Abstract
Stroke is a condition that occurs when blood supply to the brain is cut off due to blockage or rupture of blood vessels, resulting in the death of cells in some areas of the brain. Stroke is a serious health condition that requires rapid treatment, because stroke often causes death permanent disability and length of stay in the hospital. The purpose of this research was to analyze internal factors can affecting length of stay stroke patients at General Hospital A Pasuruan.
This study used analitic observasiona to 34 respondents with consequtive sampling. This population in this study were all stroke patients enter the emergency department and treated in General Hospital A Pasuruan. Data collection was conducted 1 month by giving qustionnaires and obseravation. The results of bivariate type of stroke (p value: 0,005), sex (p value:0,028), age (p value:0,025), a history of hypertension (p value:0,017) , a history of diabetes mellitus (p value:0,028) and blood sugar levels (p value :0,015). Based on the reslut, the need for the role of nurses department emergency to prociding cpmprehensively nursing care bay considering factors that my worsen the prognisis of stroke patients that will have an impact on the length of stay stroke patient in hospital .

Key words: internal factors, stroke patient, length of stay.

INTRODUCTION

Stroke is a global health problem epidemic and the main cause of disability in global and the cause of both fallen world (Yi Li et al., 2012). Stroke is a disorder of cerebral function caused by insufficiency or loss of blood supply to the cerebral area with clinical manifestations and lesions depending on the severity and location of the blockage (Jean et al., 2012). The prevalence of stroke in Indonesia has increased significantly. Currently, Indonesia is the country with the highest number of stroke sufferers in Asia. The total number of stroke patients in Indonesia is estimated to be 500.000 each year. The amount of number around 2.5% or 250. 000 people died or had minor or serious defects.

Stroke often causes death, permanent disability and long-term treatment. The length of treatment is defined as the length of time the patient is admitted to the hospital from the patient's admission to the hospital until the patient is discharged or stable (Yi Li et al., 2012). Length of care was used as the determining factor of financing during stroke patients undergoing hospitalization (Arboix et al., 2012).
The results of Appelros (2007) showed that the average duration of acute stroke was 12 days. The results of Chou Chang et al (2012) study showed that long-term predictor factors for stroke care were patient demographics, clinicalcharacteristics, NIHSS score (National Institutes of Health Stroke) of patients admitted to hospital and delayed admission to IGD as well as factors affecting stroke patients.(Mc Gillivrary & Considine, 2009) and also the research Purba (2012) showed that the factors can influence the length of treatment in the intensive care unit are complications and comorbidities. The purpose of this study is to determine the effect of internal factors on the length of stroke patient care in General Hospital A Pasuruan.

METHODE

The design of this study used observational analytics. The population in this study were all stroke patients who arrived at the Emergency Department and underwent treatment at General Hospital A at Pasuruan. Number of samples 34 respondents selected with consecutive sampling. Analysis data with chi square

RESULT

Table 1 shows that most with ischemic stroke are 20 respondents (59%), mostly aged elderly 19 respondents (56%), male sex 20 respondents (58%), most have a history of hypertension disease as many as 27

respondents (79%), most respondents had a history of diabetes mellitus 26 respondents (76%), most have blood glucose> 125 mg/dl were 20 respondents (58%) and duration of 3-10 days stroke treatment that were 18 53%).

Table 1 Characteristics of respondents based on independent and dependent variables

variabel		Total (34)	%
type of stroke	Iskemik	20	59
	Hemoraghic	14	41
age	Late adult	15	44
	Elderly	19	56
gender	Male	20	58
	Female	14	42
History of hipertension	Have	27	79
	Not have	7	21
History of diabetes mellitus	Have	26	76
	Not have	8	24
Blood glocose levels	<125 mg/dl	20	58
	>125 mg/dl	14	42

Table 2 The influence of the stroke type with the length of stay stroke patient in hospital

		Lama perawatan				P value
		3-10 hari		>10 hari		
		n	%	n	%	
Type of stroke	Iskemik	2	6	18	54	0,005
	Hemorhagic	3	9	11	31	

Significancy α = 0,05

The result of statistic test of table 2 shows that there was influence of the stroke type on the length of the length of stay stroke patient in hospital (p value = 0. 000, α = 0,05).

Table 3 The influence of the age with the length of stay stroke patient in hospital

		Lama perawatan				P value
		3-10 hari		>10 hari		
		n	%	n	%	
age	Late adult	6		13		0.025
	elderly	9		6		

Significancy α = 0,05

The result of statistical test of table 3 shows that there was an effect of age with the length of stay stroke patient in hospital (p value = 0. 025, α = 0. 05)

Table 4 The influence of the gender with the length of stay stroke patient in hospital

		Lama perawatan				P value
		3-10 hari		>10 hari		
		n	%	n	%	
gender	Male	7	21	13	38	0.028
	female	4	12	10	29	

Significancy α = 0,05

The result of statistical test of table 4 shows that there was influence of gender with the length of stay stroke patient in hospital (p value = 0. 028, α = 0,05).

Table 5 The influence a history of hipertension with the length of stay stroke patient in hospital

		Lama perawatan				P value
		3-10 hari		>10 hari		
		n	%	n	%	
History of hipertension	Have	8	23	19	56	0.017
	Not have	4	12	3	9	

Significancy α = 0,05

The result of statistical test of table 5 shows that there was influence of hypertension history to the length of stay of stroke patient (p value = 0,017, α = 0,05).

Table 6 The influence of hipertension of history with the length of stay stroke patient in hospital

		Lama perawatan				P value
		3-10 hari		>10 hari		
		n	%	n	%	
History of diabetes mellitus	Have	6	18	20	59	0.028
	Not have	3	8	5	15	

Significancy α = 0,05

The result of statistical test of table 6 shows that there was influence of history of diabetes mellitus to the length of stay of stroke patient (p value = 0. 028, α = 0,05).

Table 6 The influence of hipertension of history with the length of stay stroke patient in hospital

		Lama perawatan				P value
		3-10 hari		>10 hari		
		n	%	n	%	
Glocose blood level	<125 mg/dl	2	7	18	53	0.015
	>125 mg/dl	6	16	8	24	

Significancy α = 0,05

The result of statistical test of table 7 shows that there was influence of blood sugar level with the length of stay of stroke patient (p value = 0. 015, α = 0,05)

RESULT

The Influence of Stroke Type on with Length of Stay Stroke Patients in Hospital

Based on the results of the study table showed the majority of respondents with ischemic stroke 20 respondents (59%) and also the results of statistical test table 3 showed that there was an effect of age on the length of stay stroke patients in hospital (p value = 0. 005, α = 0. 05). This result was supported by Zhang et al (2011) research showing that the prevalence of ischemic stroke was higher than for hemorrhagic stroke. It was different with the research of Anderson et al's (2009) indicated that the prognosis of patients with hemorrhagic stroke is more severe than patients with ischemic stroke. The length of stroke treatment was highly dependent on changes in clinical conditions and stroke severity
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The Effect of Age with the Length of Stay Stroke Patients in hospital

Based on the results of the study showed that the majority of aged elderly 19 respondents (56%), while in table 2 it is known that there is the influence of the type of stroke on the length of stay stroke patients in hospital (p value = 0. 025, α = 0.05). This result was supported by the research of Al Eithan, Amin & Roberts (2011) showing that the age of 61-70 years has a high significance to the length of stroke care. This was caused by the age of elderly elatisity of the blood vessels in the elderly have begun to decrease..

The Influence of Sex with the length of stay Stroke Patients in hospital

Based on the table 1 showed the male sex of 17 respondents (50%), and also in table 4 shows that there was influence of sex on the length of stay stroke patients in hospital(p value = 0. 028, α = 0,05). These results were supported by research by Soler & Ruiz (2010) showing that males have a 33% higher prevalence of stroke. This was caused by cardioembolism as the main cause of stroke often occurs in men.

Influence History of Hypertension with The Length of Stay Stroke Patients in hospital

Based on the table 1 shows that most have a history of hypertension disease as much as 27 respondents (79%), while in table 5 shows that there is influence of history of hypertension to the length of treatment of stroke patients (p value = 0. 015, α = 0,05). These results are supported by the Al-Eithan, Amin & Roberts (2011) study showing that almost 51% of stroke patients have a history of hypertension. This is caused by an increase in blood pressure that worsens the formation of atherosclerosis and presents a complex pathological change in the arteries and arterioles that cause stroke.

Influence History Diabetes Mellitus with The Length of Stay Stroke Patients in hospital

Based on the table 1 show that most of the respondents had a history of diabetes mellitus as 26 (56%), while in table 6 showed that there was a history of diabetes mellitus effect on the length of stay stroke patients in hospital (p value = 0. 018, α = 0,05). These results are supported by Airboix (2011) research showing that diabetes mellitus as a second risk factor for stroke. This caused by diabetes mellitus will accelerate the formation of aterosklerosis on mikroangiopati and makroangiopati so will to be disruption of blood circulation in the brain

Effect of Blood Glucose Levels with The Length of Stay Stroke Patients in hospital

Based on the table 1 show that most of the blood glucose> 125 mg / dl aount of 20 respondents (59%), while in table 7 showed that the effect of blood glucose level on the length of stay stroke patients in hospital (p value = 0. 015, α = 0,05). This result is supported by the research of Yuan et al. (2012) showing that hyperglycemic conditions are common in ischemic stroke patients with a 40% prevalence as well as Juvela et al (2005) suggested that hyperglycemic conditions occur in 2/3 ischemic stroke patients. This causes diabetes mellitus to accelerate the formation of atherosclerosis in microangiopathy and macroangiopathy so will be disruption of blood circulation in the brain high blood glucose levels in stroke patients causes additional substrate supply for anaerobic metabolism which will produce lactic acid and free radicals which in turn cause damage to brain tissue.

CONCLUSION

There are correlation between type of stroke (p value: 0,005), sex (p value:0,028), age (p value:0,025), a history of hypertension (p

value:0,017) , a history of diabetes mellitus (p value:0,028) and blood sugar levels (p value :0,015) with the length of stay in hospital.

SUGGESTION

The need for the role of nurses department emergency to prociding cpmprehensively nursing care bay considering factors that my worsen the prognisis of stroke patients that will have an impact on the length of stay stroke patient in hospital

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