

ABSTRACT

Background: Stroke is still one of the leading diseases that leads to morbidity and mortality even in developed countries. It is estimated to be second most common cause of death and long term disability world wide. With hypertension as the major risk factor, stroke makes it to the top diseases that are difficult to be treated because hypertension itself is hard to be controlled even though it is modifiable. Hypertension is not the only factor responsible for poor stroke outcome, hypotension actually brings the highest risk of early death after ischemic attack. An analysis from the International Stroke Trial of 17,398 patients with an ischemic stroke noted a U-shaped relationship between baseline systolic blood pressure and outcomes. Elevated systolic blood pressure was associated with an increased risk of recurrent ischemic stroke (50 percent greater risk of recurrence with a systolic blood pressure of >200 mmHg versus 130 mmHg), while low blood pressure (particularly <120 mmHg) was associated with an excess number of deaths from coronary heart disease (Leonardo-Bee et al, 2002). In this experiment we will be using retrospective cohort as our research design, and medical record from RSUP Sardjito as our data. We will be comparing the blood pressure taken at time of admission with stroke functional outcome.

Objective: This study aims to see the relationship between Systolic Blood Pressure (SBP) with stroke functional outcome.

Method: 154 data are acquired for this study. The data are obtained from medical record in RSUP Sardjito. From the data, we obtained the blood pressure level and stroke functional outcome evaluated and given score by NIHSS recommendation. From the blood pressure level, the subjects are divided in to three categories, which are the ones with normal blood pressure, pre-hypertension, and hypertension. The relationship between these three categories with stroke functional outcome will be checked



by using chi square, without taking notice of the confounding factors.

Results: From 154 data acquired only 152 data was valid because two patients died during treatment, which is under this study exclusion criteria. From 152 data, there are 12 patients being normal, 27 being pre-hypertension, 113 being hypertension and no hypotension was found. Chi-Square was used to assess the data. The p-value obtained was 0.879 which means that the null hypothesis is accepted, there is no significant relationship between blood pressure level and stroke functional outcome.

Conclusion: There is no significant relationship between systolic blood pressure with stroke functional outcome. Further study related to this research is recommended.

Keywords: blood pressure, stroke functional outcome.

INTISARI

Latar belakang: Stroke masih menjadi salah satu penyakit utama penyumbang kematian tertinggi di negara berkembang dan diperkirakan menjadi penyebab kedua paling sering yang menyebabkan kecacatan permanen. Dengan hipertensi sebagai faktor resiko utama, stroke menjadi penyakit yang sulit untuk disembuhkan karena hipertensi sendiri sulit untuk dikontrol walaupun bisa di modifikasi. Hipertensi tidak hanya faktor satu-satunya yang bertanggung jawab atas jeleknya outcome stroke, hipotensi juga menyebabkan outcome stroke yang buruk seperti kematian mendadak setelah serangan iskemik. Analisis dari International Stroke Trial terhadap 17.398 pasien dengan iskemik stroke, menunjukkan relasi berbentuk U antara baseline tekanan sistolik dan outcomenya. Kenaikan tekanan darah sistolik berhubungan dengan kenaikan resiko dari iskemik stroke berulang (50% lebih besar dari rekurensi stroke dengan tekanan darah sistolik >300 mm Hg versus 130 mm Hg), di mana tekanan darah rendah (biasanya <120 mm hg) berhubungan dengan tingginya angka kematian dari gagal jantung koroner (Leonardo-Bee et al, 2002). Di percobaan ini, kami akan menggunakan retrospective cohort sebagai desain penelitian kami dan rekam medis dari RSUP Sardjito sebagai data kami. Kami akan membandingkan tekanan darah diambil saat waktu kedatangan dan functional outcomenya. Tujuan: penelitian ini bertujuan untuk melihat relasi antara tekanan darah sistolik dengan stroke functional outcome.

Metode: 154 data didapatkan untuk penelitian ini. Data berikut didapatkan dari rekam medis dengan melihat nilai tekanan darah sistolik dan nilai NIHSS. Dari nilai tekanan darahnya, subjek akan dibagi menjadi tiga kategoru, yaitu mereka yang mempunyai tekanan darah normal, pre-hypertension dan hypertension. Hubungan antara ketiga ini dengan functional outcome stroke akan dicek menggunakan Chi Square tanpa memperhatikan adanya confounding factors.

Hasil: dari 154 data hanya 152 data yang bisa dipakai dikarenakan 2 di antaranya meninggal dunia dalam treatment, yang merupakan exclusion criteria dalam penelitian ini. Dari 152 data, ada 12 pasien dengan



tekanan darah normal, 27 mempunyai pre-hypertension, 113 mempunyai hypertension dan tidak ditemukannya hypotension. Hasil p-value yang didapatkan adalah 0.879 yang berarti null hypothesis diterima, tidak ada hubungan antara tekanan darah dengan functional outcome.

Kesimpulan: Tidak ditemukannya hubungan antara tekanan darah sistolik dengan functional outcome stroke. Sangat direkomendasikan untuk adanya penelitian lebih lanjut.

Kata kunci: tekanan darah, functional outcome stroke.