Kadar dan asupan vitamin C dengan ketebalan komplek intima media karotis pada penderita stroke iskemik akut = Concentration and vitamin C intake with complex intima media thickness of carotid artery in acute ischaemic stroke patients

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Abstrak

[Latar Belakang. Aterosklerosis merupakan salah satu penyebab stroke iskemik yang diawali dengan terjadinya disfungsi endotel akibat dari peningkatan stress oksidatif oleh reactive oxygen species (ROS). Proses ini mengakibatkan penebalan komplek intima media (KIM) pada pembuluh darah karotis. Vitamin C (antioksidan) berperan dalam proteksi terhadap stress oksidatif dengan mencegah oksidasi LDL. Penelitian ini bertujuan untuk mengetahui kadar dan asupan vitamin C dengan ketebalan komplek intima-media, sehingga konsumsi makanan yang tinggi vitamin C diharapkan dapat menghambat perjalanan aterosklerosis. Metode. Desain penelitian adalah potong lintang untuk mengetahui gambaran kadar dan asupan vitamin C dengan komplek intima media penderita stroke iskemik onset sampai dengan 2 minggu. Subjek penelitian sejumlah 40 orang didapatkan di ruang rawat inap, poli neurologi dan IGD RSCM. Dilakukan wawancara pola maka melalui metode food recall, pemeriksaan laboraturium kadar vitamin C plasma dan USG carotis doppler.
Hasil. Didapatkan kadar rerata vitamin C plasma sebesar 0,13 ± 0,11mg/dl dan rerata asupan vitamin C yang dikonsumsi pasien perhari dalam 1 minggu terakhir SMRS adalah 102 ±74mg. Rerata ketebalan komplek intima media pada subyek penelitian adalah 0,98 ± 0,23mm. Tidak terdapat hubungan antara rerata kadar Vitamin C plasma dengan ketebalan komplek intima media dan asupan vitamin C. Terdapat hubungan antara asupan vitamin C dengan ketebalan komplek intima media (p = 0,05).
Simpulan. Kadar rerata vitamin C plasma pada penderita stroke iskemik lebih rendah dari nilai normal. Rerata ketebalan komplek intima media pada pasien stroke lebih tinggi dibandingkan nilai normal. Asupan vitamin C yang tinggi memiliki kemungkinan ketebalan kompleks intima media yang tidak menjadi semakin tebal.;Background. Atherosclerosis is one of the cause of ischemic stroke that is initiated by endothelial dysfuncion caused by increased oxidative stress from reactive oxygen species (ROS). This process leads to the thickening of intima media complex within the carotid arteries. Vitamin C, an antioxidant, plays a protective role against oxidative stress by preventing LDL oxidation. This research is aimed to study the level and intake of vitamin C in relation to intima media complex thickness so that high vitamin C intake is expected to decelerate the atherosclerotic process.
Method. This research is a cross-sectional study to know the level and intake of vitamin C in relation to the thickness of intima media complex in ischemic stroke patients at the time of onset until 2 weeks after the onset. This study recruited 40 patients from the inpatient, outpatient, and emergency deparments of Cipto Mangunkusumo hospital. Daily food consumption was assessed using food recall interview method. The serum vitamin C level was measured in the laboratorium and the intima media thickness was assessed using carotid doppler sonogram.
Result. The mean serum vitamin C level was 0.13 ± 0.11mg/dL and the mean daily vitamin C intake within the last week before hospital admission was 102 ±74mg. The mean intima media thickness was 0.98 ±

0.23mm. There was no relation between the mean serum vitamin C level with the thickness of intima media complex and vitamin C intake. There was a significant relation between vitamin C intake and the intima media thickness (p = 0.05).
Conclusion. The mean serum vitamin C level in ischemic stroke patient was lower than normal level. The mean inima media complex thickness in stroke patients was higher than normal thickness. High vitamin C intake may have a preventive relation in intima media complex thickening., Background. Atherosclerosis is one of the cause of ischemic stroke that is initiated by endothelial dysfuncion caused by increased oxidative stress from reactive oxygen species (ROS). This process leads to the thickening of intima media complex within the carotid arteries. Vitamin C, an antioxidant, plays a protective role against oxidative stress by preventing LDL oxidation. This research is aimed to study the level and intake of vitamin C in relation to intima media complex thickness so that high vitamin C intake is expected to decelerate the atherosclerotic process.
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