論 文 要 旨

Angle between the common and internal carotid arteries detected by ultrasound is related to intima-media thickness among those with atherosclerotic disease

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Abstract

Objectives Although carotid artery structural variations have been detected by ultrasound, their clinical significance is not fully understood. The objective of this study was to determine whether the angle between the common carotid artery (CCA) and the internal carotid artery (ICA), designated angle α, an ultrasound-detectable carotid artery structural variation, is related to carotid artery intima-media thickness (IMT), a surrogate marker for carotid atherosclerosis.

Methods As a cross-sectional study, we measured angle α in routine carotid artery ultrasounds from 176 subjects (130 men) with atherosclerotic disease/risk factors that attended Kouseiren Hospital in Kagoshima City, Japan between August 2007 and April 2009. We evaluated the correlation between the angle α and CCA- or ICA-IMT. *Results* Angle α was weakly correlated with age but significantly correlated with ICA-IMT. The correlation was stronger in subjects with an ICA-IMT 0.5 mm than in those with an ICA-IMT < 0.5 mm (Right side; r = 0.475 vs. r = 0.246, Left side; r = 0.498 vs. r = 0.301, 40 respectively). Upon multivariate logistic regression analysis, angle α and serum low-density lipoprotein cholesterol were independent explanatory variables for ICA-IMT. *Conclusion* Angle α is related to ICA-IMT in subjects with atherosclerotic disease or risk factors in this study.