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TITLE

Exploring the Better Medication for Small Vessel Disease of the Brain Infarction

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The neurological worsening is sometimes observed in acute brain infarction, regardless of the immediate medication. Thrombolytic therapy is a critical intervention for recanalizing the occluded main artery in the acute ischemic stroke patient. However, there is no effective therapy for small vessel stroke patients, especially with early deterioration of neurological deficits. In Japan, anti-platelet agency, cilostazol, is available for ischemic stroke treatment. Cilostazol can inhibit the activity of phosphodiesterase-3 resulting in the increase of cAMP. Increased cAMP will provide not only the anti platelet activity but also the dilation of blood vessels in the brain. Therefore, we aimed to reveal the effect of cilostazol in acute stroke therapy. The clinical outcome of patients in acute small vessel brain infarction was compared between with (group C, n=202) and without (group N, n=202) immediate cilostazol oral administration. As the results, the percentage of progressing stroke patients was significantly reduced in the group C compared with the group N (12.9% and 24.3%, p=0.003). According to the spatial analysis, the significant reduction of progressing stroke of lacunar type infarction was dominant in the brain stem and that of branch atheromatous type infarction was dominant in the basal ganglia. The effect of anti-platelet activity is not so important in acute phase of small vessel infarction. However, the increase of cerebral blood flow can help the viability of brain tissue surrounding ischemic core. Our results may be provided by the additional effect of cilostazol. In conclusion, cilostazol may increase the brain blood supply and provide the better outcome even in the small vessel brain infarction.

Biography

Taizen Nakase graduated from Kyoto Prefectural University of Medicine, since then, is working as a neurologist. He has completed his PhD from Kyoto Prefectural University of Medicine and postdoctoral studies from University of Western Ontario and University of British Columbia. He is now a director of the department of stroke science. He has published more than 30 papers in reputed journals. His researches have contributed to exploring the inflammatory response of brain infarction, the gap junctional intercellular communication in ischemic brain and the neuroprotection after brain infarction.