P-202

한국인 당뇨환자에서 혈당 변동성과 당뇨 합병증의 연관성

고려대학교 안산병원 신장내과[1], 고려대학교 안산병원 내분비내과[2], 성균관대학교 강북삼성병원 신장내과[3]

이미진[1], 민혜숙[1], 차진주[1], 송혜경[1], 이미화[1], 김정은[1], 현영율[3], 김난희[2], 차대룡[1], 강영선[1]

The Association of Glucose Variability with Diabetic Complication in Korean Diabetic Patients

Mi Jin Lee[1], Hye Suk Min[1], Jin Joo Cha[1], Hye Kyoung Song[1], Mi Hwa Lee[1]
Jung Eun Kim[1], Young Youl Hyun[3], Nan Hee Kim[2], Dae Ryong Cha[1], Young Sun Kang[1]

Department of Nephrology[1] Korea University Medical College Ansan Hospital
Department of Endocrinology[2] Korea University Medical College Ansan Hospital
Division of Nephrology[3] Kangbuk Samsung Hospital Sungkyunkwan University

Tight glycemic control lowers the risk of diabetic complications, but it is uncertain that glycemic variability influences diabetic complications.

We examined the associations of plasma glucose variability with diabetic complications in a prospective cohort of 161 Korean diabetic patients from 2002 to 2013. Intra-personal mean and standard deviation(SD) of fasting plasma glucose calculated. Also we calculated percent coefficient of variation (%CV= 100X SD/mean).

Over the duration of 11 years follow up, diabetic retinopathy and neuropathy, nephropathy developed 14%, 9%, 9.9% of patients compared to start of study. Patients who had retinopathy until the end of study, had higher percentage of coefficient of variation (23.25±10.31 vs 18.46±9.40, p=0.005) than patients without retinopathy. Patients who had neuropathy, nephropathy until the end of study, had higher percentage of coefficient of variation (25.56±10.73 vs 18.15±8.74, $p<0.001$, 24.08±10.77 vs 18.12±8.66, $p<0.001$) than patients without neuropathy, nephroapthy. Also patients who progressed to cerebrovascular disease had higher percentage of coefficient of variation (27.94±12.09 vs 20.34±9.34, p=0.014) than non-progressor.

Taken together, long-term glycemic variability was association with diabetic complication.

Key Words: 혈당 변동성, 당뇨 합병증
Glycemic variability, Diabetic complication