



Title	Relationship between endothelial dysfunction and prevalence of chronic kidney disease : The Circulatory Risk in Communities Study (CIRCS)
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論 文 内 容 の 要 旨
Synopsis of Thesis

氏 名 Name	LI YUTING
論文題名 Title	Relationship between endothelial dysfunction and prevalence of chronic kidney disease: The Circulatory Risk in Communities Study (CIRCS) (内皮機能障害と慢性腎臓病の関係：地域における循環器疾患の疫学研究)
<p>論文内容の要旨</p> <p>〔目 的(Purpose)〕</p> <p>Patients with chronic kidney disease (CKD) have a higher burden of cardiovascular morbidity and mortality than the general population. Endothelial dysfunction has been suggested to play a role in both glomerular filtration rate loss and cardiovascular damage. Thus, the present study aimed to evaluate the relationship between endothelial dysfunction and the prevalence of CKD in the general Japanese population.</p> <p>〔方法ならびに成績(Methods/Results)〕</p> <p>We conducted a cross-sectional study of 1042 men and women aged 30-81 years in two communities under the Circulatory Risk in Communities Study between 2013 and 2017. Endothelial function was evaluated by percent change of brachial artery flow-mediated dilation (%FMD) before and after the cuff inflation. Among the total 1042 participants, there were 62 cases of CKD (~6%). The multivariable odds ratios (ORs) (95% confidence intervals [CIs]) of CKD according to quartiles of %FMD were 2.02 (0.68-5.99), 3.56 (1.27-9.94), and 3.14 (1.10-8.93) for the third to lowest quartile compared with the highest %FMD quartile; p for trend=0.02. The respective multivariable ORs (95% CIs) of CKD in subjects without antihypertensive medication use (39 cases among 886 subjects) were 1.83 (0.46-7.33), 3.41 (0.92-12.61), and 4.60 (1.22-17.31); p for trend=0.01, and that for one-point decrement in %FMD was 1.16 (1.00-1.35); p for interaction with the status of antihypertensive medication use was 0.12.</p> <p>〔総 括(Conclusion)〕</p> <p>Our cross-sectional study suggested the relationship between endothelial dysfunction and the higher prevalence of CKD in the general Japanese population.</p>	

論文審査の結果の要旨及び担当者

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論文審査の結果の要旨

Patients with chronic kidney disease (CKD) have a higher burden of cardiovascular morbidity and mortality than the general population. Endothelial dysfunction has been suggested to play a role in both glomerular filtration rate loss and cardiovascular damage. This study aimed to evaluate the relationship between endothelial dysfunction and the prevalence of CKD in the general Japanese population. They recruited a total of 1,042 Japanese participants aged 30-81 years old from CIRCS Study and used brachial artery flow-mediated dilation (FMD) to measure endothelial dysfunction. After adjustment for potential confounders. We found that lowest FMD value was associated with the prevalence of CKD. The positive association was primarily observed in people without antihypertensive medication use but not in those with it. The lack of association in the medication uses may be due to the low power to detect the association and also the effect of antihypertensive agents on endothelial function. In conclusion, the study suggested the relationship between endothelial dysfunction and the higher prevalence of CKD in the general Japanese population.

本研究は学位に値すると考える