

研究業績 英文表記

和文	
表題	特定健診における呼吸機能と高いグリコヘモグロビン A1c の値との関連: 日本の受診者における横断的研究
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英文	
Title	Relationship between pulmonary function and elevated glycated hemoglobin levels in health checkups: A cross-sectional observational study in Japanese participants.
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Abstract	<p>Background: Insulin resistance has been associated with cytokines, including interleukin-6 and tumor necrosis factor alpha soluble receptor, both of which are elevated in chronic obstructive pulmonary disease (COPD). Few studies have investigated the relationship between pulmonary function tests using spirometry (PFT) and fasting plasma glucose (FPG) or glycated hemoglobin (HbA1c) levels in Japanese participants. The purpose of this study was to clarify the relationship between PFT in Japanese people who had health checkups and their FPG or HbA1c levels. In the context of preventative medicine, we intend to connect early detection of COPD to an index of blood sugar.</p> <p>Methods: From August 2013 through March 2014, 1019 participants underwent health checkups. PFT, FPG, and HbA1c measurements were conducted. HbA1c levels were measured according to National Glycohemoglobin Standardization Program guidelines.</p> <p>Results: Participants with FPG \geq100 mg/dL and HbA1c \geq5.6% showed a significantly lower forced expiratory volume in 1 s:forced vital capacity ratio (FEV1/FVC) compared to participants with lower FPG and Hb1Ac levels. Prevalence of FEV1/FVC values <70% in PFT differed significantly depending on sex, age, body mass index, FPG, HbA1c, and smoking habits. Age (\geq60 years), HbA1c (\geq5.6%), and current or former smoking were associated with FEV1/FVC values <70%.</p> <p>Conclusion: In Japan, HbA1c levels were higher in participants with FEV1/FVC values <70% in PFT than in those with FEV1/FVC \geq70%. In preventive medicine, PFT by spirometry should be performed in elderly participants with elevated HbA1c levels who are current or former smokers.</p>
keyword	Health checkups, Pulmonary function tests,FEV1/FVC, Glycated hemoglobin, Diabetes mellitus

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