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Effect of Dongchunghacho Rice on Blood Glucose and Lipid Profiles in Streptozotocin Induced Diabetic rats

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We investigated the effect of Dongchunghacho rice (polished rice cultivated with *Paecilomyces tenuipes* (PT) or *Cordyceps militaris* (CM) on blood glucose and lipid profiles level in streptozotocin (STZ)-diabetic rats. Diabetes was induced by intraperitoneal injection of STZ (50mg/kg) once a week for two weeks to 9 wk-old male Sprague-Dawley rats. The animals were then divided into 4 groups; normal-control fed control diet (NC, 65% rice as carbohydrate source), 3 diabetic groups fed either normal diet (DC), 2 sorts of Dongchunghacho rices (PT and CM, 20% Dongchunghacho rice of 65% rice) for 4 weeks. The Dongchunghacho rice supplemented rats showed higher weight gain and food efficiency ratio compared to DC group. The plasma glucose concentration decreased significantly in the CM group than in DC group. Results of the oral glucose tolerance test (OGTT) also showed a significant decrease AUC value in Dongchunghacho rice supplemented groups compared to DC group. The plasma total cholesterol decreased significantly in Dongchunghacho rices supplemented groups compared to the control groups. These results suggest that the Dongchunghacho rice supplemented to rice by 20% has hypoglycemic and hypocholesterolemic properties in STZ-induced diabetic rats.