Study on hypoglycemic effect of the crude polysaccharide extract from *Inonotus obliquus*

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**Purpose:** *Inonotus obliquus* is a very rare and valuable medicinal fungus which has a therapeutic effect on malignant tumors, heart disease, diabetes and so on. This study was conducted to observe the effect of fasting blood glucose and glucose tolerance in normal and alloxan-induced diabetic mice after given different concentrations of the crude polysaccharide extract from *Inonotus obliquus* (CPIO) by gavage. **Methods:** Diabetic mice were induced by alloxan (160mg/kg, i.p.). 24 normal mice were divided into the control group and the high dose CPIO group (500 mg/kg). 60 diabetic mice were divided into the model group, the metformin group (166mg/kg), the high dose CPIO group (500 mg/kg), the middle dose CPIO group (333 mg/kg) and the low dose CPIO group (166 mg/kg). Each group were given corresponding distilled water, metformin or CPIO by gavage for 30 days. The fasting blood glucose and glucose tolerance were determined in the last day. The results showed that middle and low dosage CPIO (333 and 166 mg/kg body weight) could significantly increase the rate of fasting hypoglycemic (p<0.05); high and middle dosage CPIO (500 and 333 mg/kg body weight) could significantly reduce the 2h glucose (p<0.01, 0.05); high, middle and low dosage CPIO (500, 333 and 166 mg/kg body weight) could significantly increase the rate of 2h blood sugar decline (p<0.05, 0.01, 0.05); middle dosage CPIO (333 mg/kg body weight) could significantly reduce area under curve of glucose (p<0.05). **Results and Conclusion:** The crude polysaccharides from *Inonotus obliquus* (CPIO) has a certain hypoglycemic effect on alloxan diabetic mice.