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• 計畫英文名稱	The Mechanism and Treatment of Antipsychotics-Induced Body Weight Gain and Metabolic Disturbance
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• 中文關鍵字	非典型抗精神病藥物; 精神分裂症; 胰島素分泌
• 英文關鍵字	Atypical antipsychotics; Schizophrenia; Insulin secretion; Olanzapine; Risperidone
• 中文摘要	背景:非典型抗精神病藥物對於精神分裂症之治療具有良好之療效，因此被視爲是治療精神分裂症的第一線藥物。但是近來由於可能會有增加罹患糖尿病或其他新陳代謝異常之風險而受到注意。本研究將針對 olanzapine 及 risperidone 對於精神分裂症患者之胰島細胞所出現之急性反應進行研究。方法:參與研究之精神分裂症患者將分成兩組，一組接受每天 10 毫克之 olanzapine 藥物治療，另一組則接受每天 2 毫克之 risperidone 藥物治療，研究期間爲 14 天。個案將在第 0 天及第 14 天利用 intravenous glucose tolerance test 方式來檢查胰島素分泌及反應，並檢驗空腹血糖、胰島素、血脂肪、及 leptin 濃度。結果:兩組個案在研究開始時的各項基本資料及實驗室數值均無明顯差異。在兩週的治療後，兩組在治療前後之體重、BMI、空腹血糖、胰島素、膽固醇、及 leptin 濃度亦無明顯差異。olanzapine 藥物治療組則在 triglyceride 濃度出現顯著增加。在兩週的治療後，兩組在治療前後之胰島素敏感性及阻抗性均無顯著差異。olanzapine 藥物治療組則在胰島素分泌出現顯著減少。結論:在接受兩周之 olanzapine 治療後，精神分裂症患者會出現胰島素分泌減少之情形，顯示 olanzapine 可能會對於胰島細胞功能有直接之影響。
• 英文摘要	Abstract Background: Atypical antipsychotics, such as risperidone, olanzapine, and quetiapine, are effective treatment for schizophrenia and considered as first line therapy. Recently, increasing attention has been drawn to the potential diabetogenic effect of novel antipsychotics. The goal of this prospective study is to evaluate the acute effect of olanzapine and risperidone treatment on pancreatic beta-cell function in atypicals-naive schizophrenic patients. Methods: Subjects were assigned to therapy with olanzapine

(10 mg／day; n=13) or risperidone (2 mg／day; n=13) for 14 days. The metabolic parameters were quantitatively assessed at baseline and the end of study period by using the intravenous glucose tolerance test. The levels of fasting glucose, fasting insulin, cholesterol, triglyceride, high-density lipoprotein, low-density lipoprotein, and leptin were also assessed. Results: There were no significant within-group changes in weight or body mass index for both groups after 2 weeks treatment. The levels of fasting glucose, fasting insulin, cholesterol, or leptin did not change in both groups. The triglyceride level significantly increased in olanzapine group. Insulin sensitivity index and insulin resistance (insulin／glucose ration and homeostasis model assessment) did not change in both groups. Insulin secretion significantly decreased in olanzapine group. Conclusions: After 2-weeks of olanzapine treatment, schizophrenic patients decreased insulin secretory response to a hyperglycemic challenge. The results of this study support the hypothesis that olanzapine directly impair pancreatic beta-cell function.