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Decreased risk of Parkinson's disease in diabetic patients with thiazolidinediones therapy: An exploratory meta-analysis V.3

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ABSTRACT

Parkinson's disease (PD) is a prevalent and complex neurodegenerative disorder with prominent loss of dopaminergic neurons in the substantia nigra. Rest tremor, rigidity, bradykinesia, and postural instability are the four classical motor symptoms. PD is the second most common neurodegenerative disease. The annual incidence is 14/100 000 of the total population in Europe and the Americas, while the rate increased to 160/100 000 in people aged over 65 years. The incidence is similar in Asia. Thiazolidinediones (TZDs), a class of peroxisome proliferator-activated receptor-gamma (PPAR-γ) agonists, can improve insulin sensitivity and lower blood glucose level for patients with type 2 diabetes.

Recently, accumulating experiments indicated that TZDs could exert anti-inflammatory and neuroprotective effects in a series of PD animal models. Nevertheless, one randomized controlled trial (RCT) indicated that pioglitazone is unlikely to be able to slow the disease progression in early PD patients without diabetes. To date, several retrospective observational cohort studies have assessed the association between the TZDs use and the incidence of PD in diabetic patients, but with controversial results.

Thererfore, we performed this meta-analysis to evaluate the efficacy of TZDs in reducing PD risk among diabetic patients.

EXTERNAL LINK

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