Abstract: Parkinson's disease (PD) is a common chronic neurological degenerative disease. The present study showed that mitochondrial damage might be the key mechanism of familial or sporadic PD. The researches of relationship between mitochondrial and PD were mainly focused on the function and structure of mitochondria. While mitochondrial dynamics regulates the function of mitochondria, which means that fusion and fission balance of mitochondria determines the dynamic changes of mitochondrial morphology, and then determines the mitochondrial function. The present studies showed that mitochondrial fission and fusion need to depend on a series of GTPase dynamin-related proteins, mainly including the mitochondrial fission protein Drp1, fusion protein OPA1 and matrix protein Cypd. Mitochondrial dynamics may be another target for PD therapy in the future.

Keywords: Parkinson's disease; Mitochondria; Dynamics