Methods  Newly diagnosed 252 consecutive PD patients were included and followed as part of an ongoing PD registry. PD was diagnosed according to the United Kingdom brain bank diagnostic criteria. 79 PD patients fulfilled the DSM-IV criteria for major depression. The UPDRS motor score was checked at the best “on” period to assess the clinical severity of PD. We compared the clinical data between depressive (DP, n=79) and non-depressive (NDP, n=173) groups.

Results  The prevalence rate of depression in PD was 31.3% in this study. There was no difference in age (DP: 62.3±2.5, NDP: 59.5±2.7 yrs), age of disease onset (DP: 52.0±3.7 yrs, NDP: 54.7±3.8 yrs), UPDRS motor scores (DP: 36.2±5.6, NDP: 33.8±3.7) and Hoehn and Yahr stage (DP: 3.5±0.52, NDP: 2.9±0.65) between two groups.

Conclusion  There was no significant difference in clinical features between DP and NDP groups in this study. These results suggest that depression in PD is not influenced the severity of motor symptoms and that non-dopaminergic neurotransmitters, such as norepinephrine and acetylcholine, at least associated with the pathophysiology of depression in PD.

Introduction  Persistent Organic Pollutants (POPs) is recently linked to insulin resistance and type 2 diabetes. Although POPs are mostly bioaccumulated in adipose tissues, most studies have measured serum concentration of POPs because of difficulties of collecting adipose tissues. This study was performed 1) to compare patterns of concentrations of POPs between visceral adipose tissue (VAT) and subcutaneous adipose tissue (SAT), and 2) to investigate associations of insulin resistance with concentrations of POPs in VAT or SAT.

Methods  We collected both VAT and SAT from 50 patients who underwent abdominal surgery and analysed 14 organochlorinated pesticides (OCPs) and 19 Polychlorinated biphenyls (PCBs). Insulin resistance was estimated using homeostasis model assessment method (HOMA-IR).

Results  Concentrations of OCPs and PCBs among VAT and SAT were highly correlated, but absolute concentrations of PCBs in VAT were 3–4 times higher than those of SAT. As concentrations of p,p’-DDT, p,p’-DDD, cis-nonachlordane, trans-nonachlordane, PCB28, PCB105, and PCB118 in VAT or SAT increased, HOMA-IR significantly increased. The risk of elevated HOMA-IR (>50th percentile) was 5 to 10 times higher among subjects in the 3rd tertile of these POPs compared with those in the 1st tertile. Although here are some differences depending on individual POP, the positive associations between POPs and HOMA-IR were generally more obvious in VAT than SAT. Also, the extent of macrophage infiltration in VAT was positively associated with concentrations of POPs in VAT, not SAT.

Conclusion  The current study strongly suggested that some POPs accumulated in VAT may be involved in the development of insulin resistance.