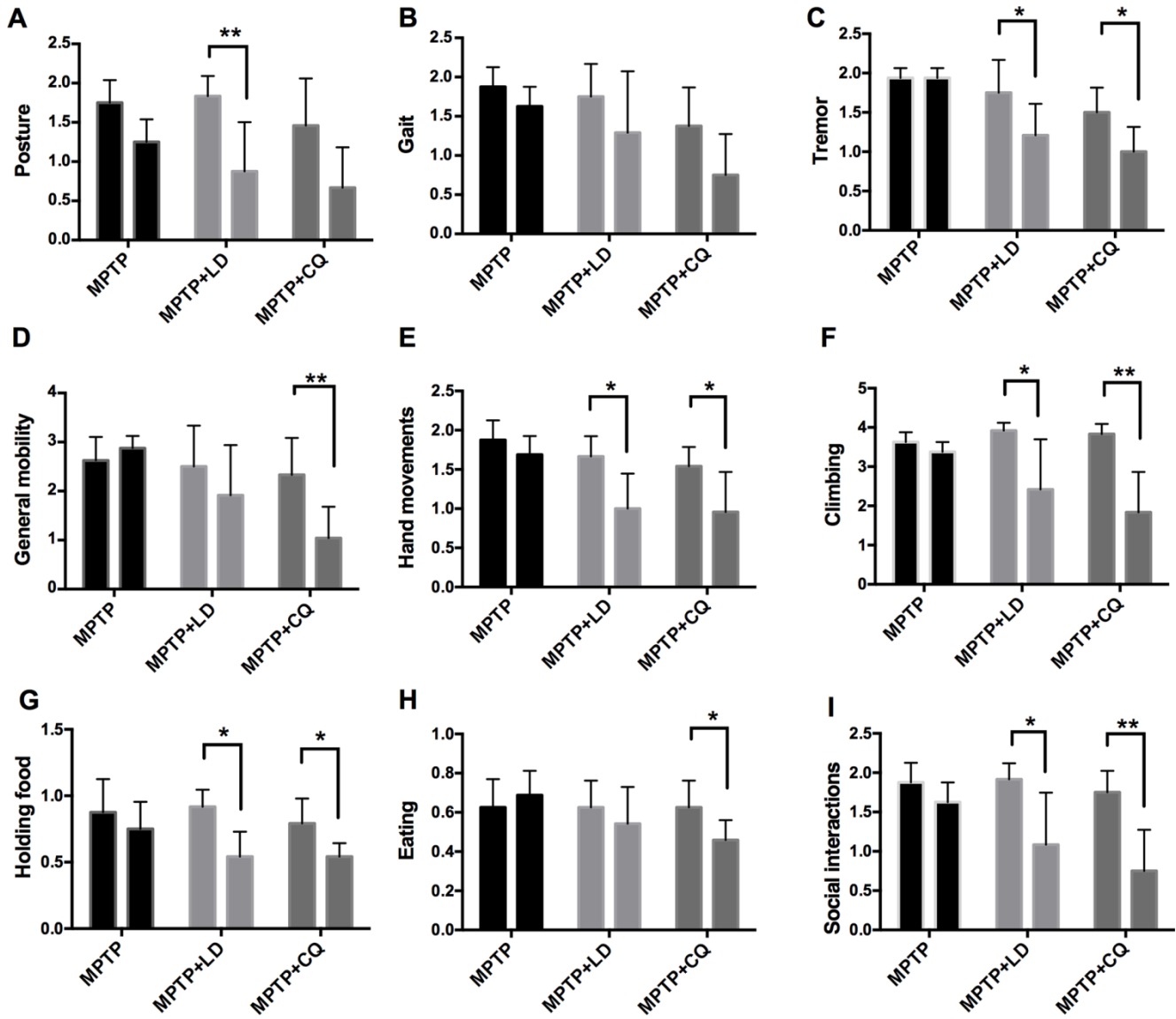
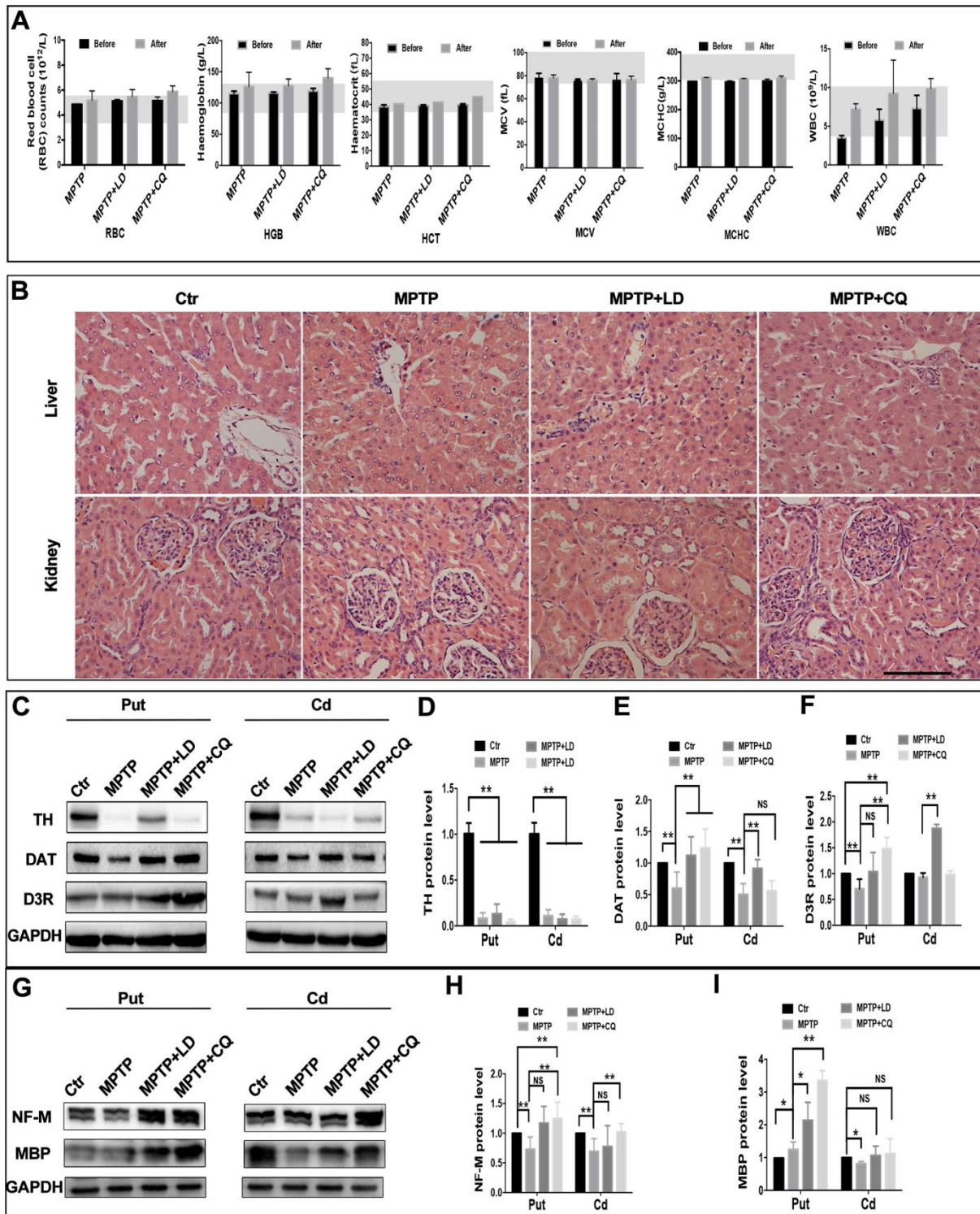


**SUPPLEMENTARY FIGURES**



**Supplementary Figure 1. Comparison of each item of Papa scale before and after treatment.** L-dopamine (12mg/kg) and CQ (10mg/kg) were orally administrated for 4 weeks after MPTP intoxication. Both LD and CQ treatment significantly reduced the tremor score(C), hand movements score(E), climbing score(F), holding food score(G) and social interactions score(I). Additionally, LD significantly reduced posture score(A), and CQ significantly reduced gait score(B), general mobility score(D) and eating score(H). Data expressed as mean ± SD. \*P<0.05, \*\*P<0.01, indicate significant difference.



**Supplementary Figure 2. CQ caused no side effect on peripheral blood, liver and kidney and CQ improved the pathology in the Striatum.** (A) Quantification showed the blood biochemistry test results were all in the normal level before and after CQ treatment. Abbreviation: RBC: Red blood cell counts; HGB: Haemoglobin; HCT: Haematocrit; MCV: Mean corpuscular volume; MCHC: Mean corpuscular haemoglobin concentration; WBC: White blood cell counts. (B) Representative images of hematoxylin and eosin staining showed normal architecture in liver and kidney from each group monkeys. Scale bar=200µm. (C–F) Western bolts and quantification showed increased expression of TH, DAT, and D3R in the striatum of t MPTP+LD and MPTP+CQ group monkeys in comparison to the MPTP group. (G–I) Western bolts and quantification showed increased expression of NF-M and MBP in the striatum of the MPTP+LD and MPTP+CQ group monkeys in comparison to the MPTP group. Data expressed as mean ± SD. \*P<0.05, \*\*P<0.01, indicate significant difference.