Supplementary section

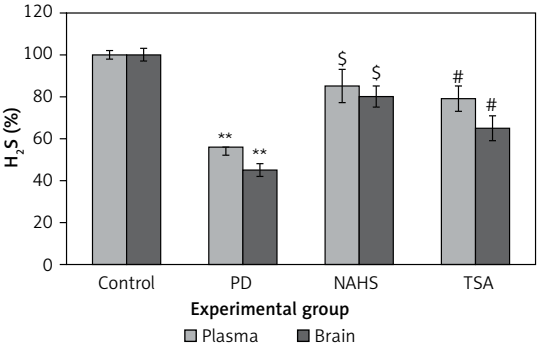
Material and methods

Estimation of hydrogen sulfide

The estimation of hydrogen sulfide concentration in brain tissue and plasma samples was carried out as per the previous publications [1, 2] with little modifications as per our tissue samples. This spectrophotometric method involves the reaction of sulfide with *N,N*-dimethyl-*p*-phenylenediamine sulfate in the presence of the oxidizing agent Fe^{3+} in hydrochloric acid to form methylene blue that is read at 670 nm.

Results

Supplementary Figure S1 shows the effect of NaHS and TSA on the levels of H_2S evaluated in PD induced rats. The levels of H_2S were found to be decreased in both the plasma and brain tissues of PD induced rats compared to control rats. The administration of drugs NaHS and TSA has elevated the levels of H_2S ($p < 0.05$) equivalent to control, suggesting protective effects.



Supplementary Figure S1. Level of H_2S in the plasma and brain tissue of control and experimental groups of rats. The amount of H_2S release was compared between groups and expressed as a percentage

*Values are expressed as mean ± SE (n = 6). Statistical significance expressed as *p < 0.05, **p < 0.01 compared to saline-treated controls, $^{\$}p < 0.05$ NAHS compared to PD rats; $^{\#}p < 0.05$ TSA compared to PD rats.*

References

1. Yang Z, Feng L, Junbao DU, Chaoshu T, Guoheng XU, Bin G. Modified methylene blue method for measurement of hydrogen sulfide level in plasma. Acta Physiol Sinica 2012; 64: 681-6.
2. Dutta M, Biswas UK, Chakraborty R, Banerjee P, Roychaudhuri U, Kumar A. Evaluation of plasma H2S levels and H2S synthesis in streptozotocin induced type 2 diabetes – an experimental study based on Swietenia macrophylla seeds. Asian Pacif J Trop Biomed 2014; 4: S483-7.