Effects of Pecan Nut (*Carya* illinoensis) Shells Extract on Citoxicity Induced by Sodium Nitroprussiate in Rat Brain Slices.

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The tea of pecan shells (*Carya illinoensis* K. Kock) is used in the folk medicine by its high levels of polyphenols (higher than the kernels), related to antioxidant properties. Considering that scientific research in herbal medicine with neuroprotective activity may be a great benefit as an alternative therapy in neurodegenerative diseases, the aim of this study was to evaluate the effects of pecan shells aqueous extract (AE) on the neural injury induced by sodium nitroprussiate (SNP). Assessment of neural injury was obtained by a colorimetric assay for cell survival using MTT. All the concentrations of AE (100, 200 and 300µM) increased the MTT reduction (%) in the slices of rat striatum (98.3±39.1; 114.0±36; 129.9±25.1%) and hippocampus (134.7±37.1; 120±88.5; 180.1±26.1%), when compared to control group (SNP). These values were similar to basal levels (no SNP). In the cortex, just 200 and 300 µM AE were effective in increasing MTT reduction (134±20.3 and 164.9±59.4%, respectively). Data were analyzed by one-way ANOVA followed by Duncan's test ($p<0.05$), expressed as mean±S.D. These results show that pecan shell AE increased neural viability by the increase in MTT%, suggesting neuroprotective potential. *In vivo* studies are needed to confirm it.

Keywords: *Carya illinoensis, cell viability, MTT.*

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