A165 Cardioprotective effects of *Emblica officinalis* (EO), a phytoadpatogen in chronic psychophysiological stress in rats.

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Emblica officinalis (Amla) is widely used as an adaptogen in Indian medicinal system. Psychophysiological stress causes dysfunction of various vital organs including heart and brain, which can be responsible for significant morbidity and mortality. In the present study the effect of EO on cardiac changes associated with psychophysiological stress were evaluated. Adult male wistar rats (150-200 g) were subjected to immobilization stress for six hours per day for 21 days and fed orally with crude extract of EO (250, 500 &750 mg/kg/day) simultaneously. The level of TBARS, an index of lipid peroxidation and endogenous antioxidants like reduced glutathione (GSH), superoxide dismutase (SOD), catalase and glutathione peroxidase (GPx) and reduced/oxidized glutathione (GSH/GSSG) were assessed in rat hearts. Histopathological changes in the heart samples of all the groups were also studied. Mild focal necrosis associated with increase in SOD and catalase activities and fall in GSH content was observed in the hearts of the stressed animals. This is suggestive of a deleterious cardiac effect of psychophysiological stress. EO treatment prevented the occurrence of pathological changes and rise in SOD and catalase activities. Therefore, the results of the present study suggest that EO act as an adaptogen and prevent the cardiac changes associated with psychosocial stress.

A166 Effect of herbal medicines on the *in vitro* production of advanced glycation endproducts (aGES)

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Diabetic nephropathy is major chronic complication of diabetes mellitus. The irreversibly formed AGEs do not return to normal when hyperglycemia is corrected and continue to accumulate over the lifetime of protein. The AGEs inhibitor, aminoguanidine (AG), is the only protein glycation inhibitor currently under development, its safety however is desirable. To find possible AGEs inhibitor in herbal medicines, bovine serum albumin was added to a mixture of sugars and ten boiled herbal prescriptions or AG. After incubating at 37°C for 31 days, it was found that Daehwangmokdanpi tang (I) and Daeshiho tang (II) showed significant inhibiting effects on the AGEs formation with IC_{50} at concentrations of 20.98 and 21.94 μg/ml relative to AG(34.00 μg/ml), respectively. The composition of I was as follows: Rhei rhizoma, Moutan cortex radicis, Persicae semen, Malvae semen, Sodium sulfate. In comparison to the negative control with no inhibitor, I and II showed 95.97% and 89.76% inhibition effect at a concentration of 250 μg/ml respectively. These results revealed that some herbal medical prescriptions had a more potent *in vitro* inhibitory action on AGEs formation than AG, suggesting the possibility of developing remedies for diabetic nephropathy from herbal medicines.