

# TA-5 Possible protective role of Ceylon tea on Spinocerebellar Ataxias- A pilot study

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**Introduction-** Spinocerebellar ataxias (SCAs) are a group of heterogeneous neurodegenerative disorders. Compromised oxidative stress defense capacity and mitochondrial dysfunction due to cytoplasmic and nuclear aggregate formation of mutant proteins have emerged as contributing factors to the pathogenesis of polyQ diseases. **Objective-** To assess clinical and genetic features and to investigate the effect of black tea against disease progression in SCA cohorts in Sri Lanka. **Methods-** Clinically diagnosed SCA patients [n=20, age range 30-67, Male- 11 (55%), Female- 9 (45%)] from neurology clinics at two tertiary hospitals were studied. Sociodemographic factors, clinical data, family history and Consumption of tea were obtained using a standard questionnaire. Patients were subjected to genotyping for SCA1, SCA2 and SCA3. **Results-** SCA patients age of onset 21-64yrs (mean= 39±13.7) Familial inheritance n=13(65%); paternal inheritance n=12(92%). Genotyping distinguished SCA subtypes; SCA1 (n=6, 30%), SCA2 (n=1, 5%) and SCA3 (n=4, 20%) while remaining were negative for studied subtypes. Black tea consumption & Scale for the Assessment and Rating of Ataxia (SARA) score range was between 5.5-24 (mean = 14.9 ± 5.7). Patients with tea consumption 3 cups/day n =5 , mean

SARA score = 13.2; 2 cups/day n =9 , mean SARA score = 13.9 ; 1cups/day n =6 , mean SARA score = 17.7 **Conclusion-** Regular consumption of black tea indicates a trend towards lowering the risk of motor impairment in SCA. This study may suggest justification in exploring regional natural product based nutraceuticals to enhance quality of life through preventing aggregation of mutant protein.

**Keywords:** spinocerebellar ataxias; tea; genetics; Sri Lanka