PHYTOCEE®

Immunomodulatory Role of Ingredient of PHYTOCEE® : *Emblica officinalis*

OBJECTIVE

To investigate the protective effect of amla against arsenic induced apoptosis in thymocytes of mice.

MATERIALS AND METHODS

The Balb/c male mice (15 ± 2 g) were used for the study. The animals were randomly divided into four groups consisting of 10 animals in each group. Group I-Mice were treated with vehicle (2% gum acacia) and served as control. Group II-Mice were treated with arsenic as sodium arsenite (3 mg/kg body weight p.o., daily for 30 days). Group III. Mice were treated with fruit extract of amla (500 mg/kg body weight, suspended in 2% gum acacia, p.o., daily for 30 days). Group IV. Mice were co-treated with arsenic and fruit extract of amla identically as in group II and III. After the last dose of treatment, animals were sacrificed and thymus of all the animals was isolated, put into the phosphate buffer saline (PBS) and processed for the measurement of apoptotic parameters.

RESULTS

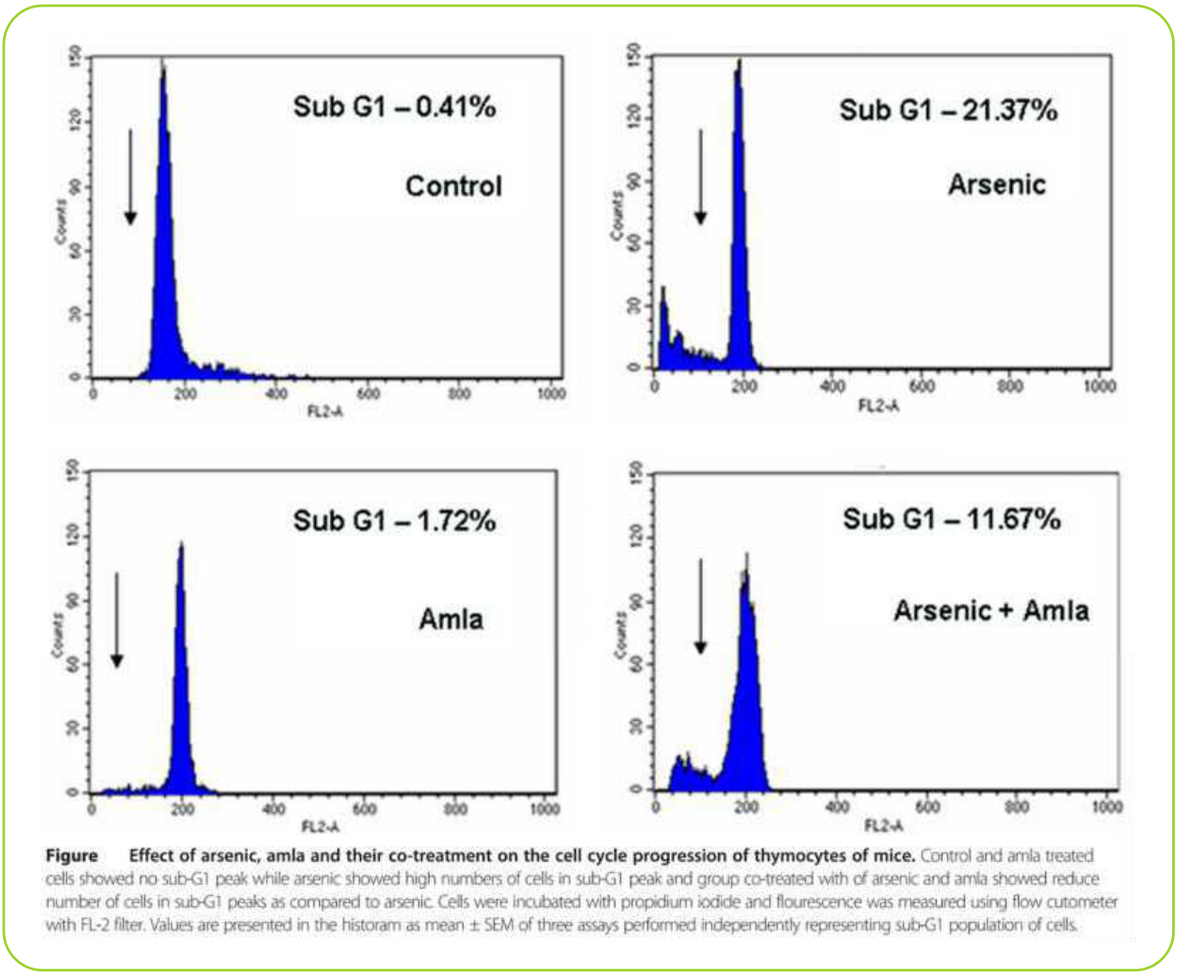

Figure Effect of arsenic, amla and their co-treatment on the cell cycle progression of thymocytes of mice. Control and amla treated cells showed no sub-G1 peak while arsenic showed high numbers of cells in sub-G1 peak and group co-treated with of arsenic and amla showed reduce number of cells in sub-G1 peaks as compared to arsenic. Cells were incubated with propidium iodide and flourescence was measured using flow cutometer with FL-2 filter. Values are presented in the historam as mean ± SEM of three assays performed independently representing sub-G1 population of cells.

CONCLUSIONS

Arsenic exposure to mice caused increased cell apoptosis as assessed by the cell cycle analysis.

OUTCOME

Co-treatment with arsenic and amla decreased cell apoptosis and increased cell viability.

Reference:
Singh M K, Yadav S S, Gupta V, *et al*. Immunomodulatory role of *Emblica officinalis* in arsenic induced oxidative damage and apoptosis n thymocytes of mice. BMC Complement Altern Med. 2013;13:193.