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***Terminalia arjuna* modulates IL-18 induced inflammation in human monocytic cell line and in patients with stable coronary artery disease**

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The bark extract of *Terminalia arjuna* is used traditionally, as a cardio protective agent in Ayurvedic system of medicine. Coronary artery disease (CAD) attracts morbidity and mortality worldwide and inflammation plays a pivotal role in pathophysiology of CAD. Besides use of several drugs like statins, inflammation persists in these patients. The present study demonstrates the anti-inflammatory and cardio protective effects of *Terminalia arjuna* *in vitro* in a human monocytic cell-line (THP-1 cells and its validation in stable patients of coronary artery disease. THP-1 cells were exposed to pro-inflammatory cytokine IL-18 and the effect of an aqueous extract of *Terminalia arjuna* was evaluated *in vitro* on the expression of inflammatory molecules. The observations of the *in-vitro* study were further validated in a randomized, placebo-controlled, double-blind clinical trial in 50 subjects with stable CAD who received either placebo or *T. arjuna* (500 mg twice a day; Himalaya) and were followed up to 6 months. Expression of inflammatory genes e.g. CXCL3, COX-2, DUSP-1 and OSM were significantly reduced *in-vitro* in a dose and time-dependent manner by *Terminalia arjuna*. TA utilized MAPKs and NF-KB pathways for its mode of action. These findings were validated in Medicated stable-CAD patients who were given *Terminalia arjuna*. Our data advocates use of *Terminalia arjuna* as an adjuvant therapy that helps to prevent and ameliorate CAD via its anti-inflammatory and cardio protective effects. Future studies are warranted in a larger population setup using *Terminalia arjuna* as an adjuvant therapy to assess its efficacy.

Biography

Veena Dhawan has completed her Department of Experimental Medicine and Biotechnology from Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh India. She is currently the senior faculty (Professor) in the Department of Experimental Medicine and Biotechnology. She has published more than 50 papers in national and international journals.

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