

Proinflammatory Factors Inhibition Potential of Ingredient of PHYTOCEE®: *Emblica officinalis*

OBJECTIVE

To evaluate the antiinflammatory properties of amla (*Emblica officinalis*) fruit extract.

MATERIALS AND METHODS

Male Wistar rats were used in this study. The test material was a commercial Amla fruit extract. Endotoxaemia was induced in the rats by intraperitoneal injection of liposaccharide (LPS). In brief, healthy 8 weeks old male Wistar rats (n=40) were grouped into an Amla group (n=20) and a control group (n=20). The rats in the Amla group were orally injected with the Amla fruit extract (50 mg/kg body weight). At 5 min after injection, the rats in both the groups were intraperitoneally injected with LPS at a dose of 2 mg/kg body weight. After the injection of LPS, the rats (n=5) in each group were killed at 0, 4, 8 and 24 h time intervals and serum samples were collected. The concentrations of the inflammatory mediators IL-6 or TNF- α in rat serum were measured using ELISA kit-based assay methods.

RESULTS

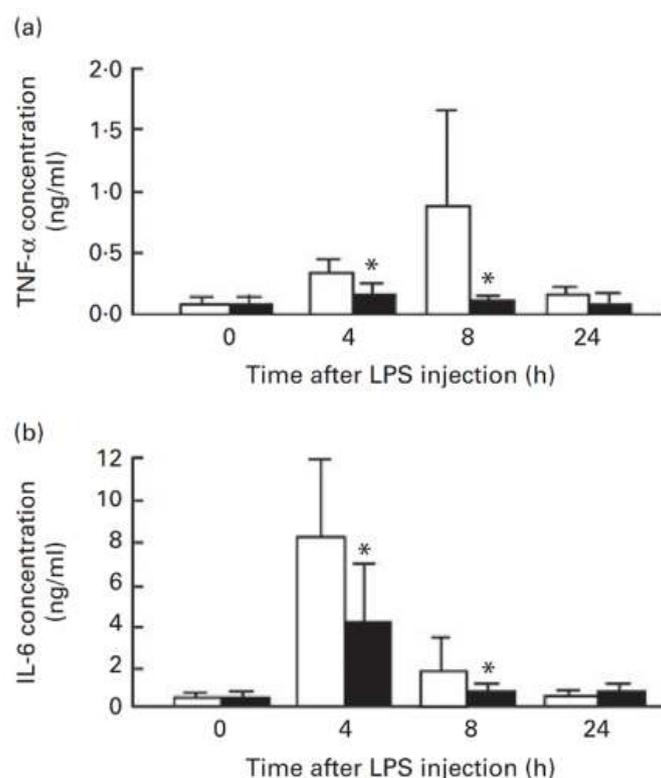


Fig. 4. Effects of amla fruit extract on lipopolysaccharide (LPS)-induced cytokine expression *in vivo*. Serum concentrations of (a) TNF- α and (b) IL-6 of endotoxaemia model rats (*n* 5) given 50 mg/kg body weight of amla fruit extract (■) or PBS (□) by oral administration were measured. Values are means of five individual samples, with standard deviations represented by vertical bars. *Mean values were significantly different from those of time-matched PBS-injected rats ($P < 0.05$; unpaired *t* test).

CONCLUSIONS

Aoral administration of the Amla fruit extract (50 mg/kg body weight) significantly decreased the concentrations of proinflammatory cytokines, TNF- α and IL-6 in serum.

OUTCOME

These results suggest that Amla fruit extract may be an effective antiinflammatory agent.

Reference:

Rao TP, Okamoto T, Akita N et al. Amla (*Emblica officinalis* Gaertn.) extract inhibits lipopolysaccharide-induced procoagulant and proinflammatory factors in cultured vascular endothelial cells. *Br J Nutr.* 2013;110(12):2201-6.