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Topic of Research: Evaluation of anti-inflammatory activity of a combination of Unani herbs: Darchini, Khulanjan and Asgand

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Findings

Anti-inflammatory and anti-oxidant activities of an herbal combination Darchini, Khulanjan and Asgand were evaluated *in Vitro* and *in Vivo*. The expression of TNF α , IL- 1 β , IL 6, COX 2 and iNOS against β -Actin was inhibited by the poly herbal extract in a dose dependent manner. MTT assay showed no significant cytotoxic effect and acute toxicity study revealed that this herbal combination is safe up to 2000 mg/kg animal dose with no significant rise in BUN and Serum Creatinine. The anti-inflammatory activity of was evaluated by Carrageenan induced paw edema and the anti-arthritic activity was evaluated by the Formaldehyde induced arthritis. The novel drug showed the anti-inflammatory and anti-arthritic activities at all two doses tested.

The production of NO was decreased when the concentration of the herbal extract was increased. The extract showed statistically significant antioxidant properties in all evaluated parameters like DPPH Radical Scavenging Activity, H₂O₂ radical scavenging activity, Nitric oxide radical scavenging assay, Superoxide dismutase activity. Further, expressions of the genes such as NrF2 and HO1 were also enhanced. Hence, this drug has anti-inflammatory, anti-arthritic and antioxidant activities. Therefore, this herbal extract consisting Darchini, Asgand, Khulanjan is safe and effective in the treatment of inflammation and arthritis.