

Abstract for Oral Presentation
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AN HERBAL REMEDY INHIBITS THE EXPRESSION OF THE CHEMOKINE
REGULATED UPON ACTIVATION, NORMAL T CELL EXPRESSED, AND SECRETED
(RANTES) IN ENDOMETRIOTIC STROMAL CELLS

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Objective:

There is growing evidence that medicinal Chinese herbs may suppress pro-inflammatory chemokines such as RANTES and ameliorate endometriosis-associated symptoms. We prepared organic extracts of a traditional Chinese herb combination and analyzed its effects on NF-Kappa B mediated transcription, RANTES gene and protein expression in normal and endometriotic stromal cells.

Methods:

We prepared an ethanol extract from a popular Chinese endometriosis herb preparation (containing Angelica root, cinnamon twig, Corydalis extract rhizome, frankincense resin, licorice root, myrrh resin, Salvia root, Tang Kuei root, and white peony root). Eutopic endometrium from women with and without endometriosis was obtained by Pipelle biopsy at laparoscopy. The stromal cells were cultured using established conditions. Dose-response and time-course experiments were carried out after an assessment of solubility and toxicity of the extracts. Inflammatory responses were monitored using consensus NF-KappaB response element and -477 bp RANTES gene promoter luciferase constructs transiently transfected into endometrial stromal cells. Conditioned media concentrations of RANTES were measured by ELISA.

Results:

TNF-alpha and IL-1-beta stimulated NF-KappaB response element and RANTES promoter-luciferase activity in transfected in normal and endometriotic stromal cells. Chinese herb extract pretreatment (4h) resulted in a >2-fold decrease of luciferase activity in these cells ($p < 0.05$). The addition of the Chinese herb extract to TNF and IL-1 treated endometriotic stromal cells resulted in a significant inhibition of RANTES protein secretion ($p < 0.05$).

Conclusions:

We have demonstrated that an extract of Chinese herbs can suppress NF-KappaB activation, RANTES gene expression and protein secretion by endometriotic stromal cells. The findings suggest that Chinese herbal remedies may exert their salutary clinical effects by reducing chemokine production and inflammation and support a mechanism for their use in the treatment of endometriosis.

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