Clinical and Biologic Activity of an Estrogenic Herbal Combination (PC-SPES) in Prostate Cancer

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Background
Herbal remedies are widely used in the United States and worldwide in the treatment of a wide range illnesses. The efficacy of many of these herbs is unknown, but many people advocate their ability to cure diseases ranging from depression to cancer. The activity of some herbs is grounded on scientific principles. For example, the herb Saint Johns Wort, used to treat depression, has biologic activity similar to many pharmacologic anti-depressants in inhibiting monoamine oxidase activity. Other herbs have no known reason for activity, and indeed, may not work as advertised.

Cancer patients are among those who actively seek alternative medicine. PC-SPES is an herbal remedy that is touted for prostate cancer. This combination of eight herbs including Chrysanthemum, licorice, saw palmetto and skullcap, is often quoted to battle prostate cancer without estrogenic side effects that may include loss of libido, breast swelling and hot flashes. Physicians at the Robert Wood Johnson Medical School studied PC-SPES to determine its estrogenic activity, its anti-cancer activity and side effects.

Materials and Methods
The results of their study were published in the September 17, 1998 New England Journal of Medicine. PC-SPES was found to have potent estrogenic activity in yeast, mice and humans. Liquid and gas chromatography and mass spectrometry revealed that PC-SPES has estrogenic organic compounds that are distinct from estrone, estradiol and diethylstilbestrol. The clinical activity of PC-SPES was examined in eight men with hormone sensitive prostate cancer, by measuring blood levels of testosterone and prostate specific antigen. In all men tested, PC-SPES significantly decreased levels of testosterone and prostate specific antigen. All eight men on the medication also experienced side affects: all eight reported breast tenderness and loss of libido and one man developed a blood clot in the leg, a potentially life threatening event.

Discussion and Conclusions
The authors conclude that PC-SPES may prove beneficial in the treatment of hormone sensitive prostate cancer but warn that PC-SPES must be systematically studied before conclusions regarding its anti-cancer effects can be drawn. In addition, the use of PC-SPES by men undergoing treatment of prostate cancer may confound the results of standard treatments. Finally, this herbal medicine is not without significant toxicity and it is strongly recommended that patients consult with a physician before taking PC-SPES.