

Study on home remedial herbs for the prevention and treatment of polycystic ovary syndrome (PCOS) in reproductive women

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Abstract

Statement of the Problem: Polycystic ovary syndrome (PCOS) is an endocrine disorder causes anovulation in women of reproductive age with hyperandrogenic manifestations are menstrual irregularity, acne, hirsutism and oligo-ovulation/anovulation. Metabolic abnormalities such as dyslipidemia, insulin resistance with diabetes, obesity, cancer and coronary heart diseases contributes with PCOS. The most common PCOS symptoms are unit uncomprehensible, irregular, infrequent, or prolonged periods. Excess androgens will cause hair loss, hair in places you don't wish it (like on your face), and acne. Doctors don't recognize all of the explanations why some ladies get PCOS. You might be additional seemingly to own PCOS if your sister or mother additionally has it. It might even be associated with issues that build your body turn out an excessive amount of hormone, which may have an effect on your ovaries and their ability to expel (or unleash eggs). When you have PCOS, your fruitful hormones are unit out of balance. *this* may cause issues along with your ovaries, like not having your amount on time or not obtaining it. In PCOS estrogen level decreases, progesterone level increases and LH/FSH ratio becomes three times of the normal level. Androgens are synthesized by theca cells. Herbs selected for PCOS study and its effects. Study includes natural home remedial herbs of Wealth of India support knowledge for easy-use oral formulation for PCOS affected women. Herbs are *Linum usittatissimum* (Linseed/flax seed) decrease androgen levels, normalize lipid levels and its lignans reduce the excess testosterone, diminish symptoms associated with hyperandrogenism, such as hirsutism; *Zingiber officinale* (Ginger) rhizome naturally shrinks ovarian cysts, normalize menstrual cycle and hormonal balancing; *Cinnamomum zeylanicum* (Cinnamon) bark regulates insulin stimulated glucose uptake, orally improves menstrual cycle and effective for PCOS; *Ocimum tenuiflorum* (Tulsi or basil leaves) lowers blood sugar level, and controls androgen and moderate insulin levels; *Trigonella foenum-graecum* (Fenugreek) causes significant improvement in menstrual cycle and significant increases in LH and FSH causes pregnancy.

Formulation and pharmacological study of selected home remedial herbs for oral administration

Home remedial herbs with demonstrated endocrinological effect for PCOS were carefully selected, washed and shade dried. They were ground for required particle size using hand-held grinder. The ground mixture of the herbs showed particle size between 548-665 μm , the flow angle of repose value was $< 27^\circ$, Hausner's ratio value was < 1.25 , and % compressibility was found 16.7%, which indicated good flowability with convincing oral administration. The required quantity of the study herbs mixture, aqueous solvent, with sufficient quantity of glycerine, a suitable natural preservative, natural sweetener and a natural colorant, were blended into pharmaceutical herbal suspension.

The formulated herbal suspension was tested in albino Wistar rats (Ethical approval number 662/02/C/CPCSEA). A comparative study was conducted with control and test animals. The animals tested showed no any acute toxicity symptoms and the uterus organ was found normal with good integrity strength versus control. The other essential organs were remained unaffected.

Conclusion: The oral herbal formulation for the PCOS was assessed for its formulation parameters as oral suspension and for its effective treatment in the PCOS was proved to be successful. The selected home remedial herbs proved to be effective for the prevention and treatment of PCOS. Hence the formulated herbal suspension can be marketed for the treatment of polycystic ovary syndrome therapy.

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