

Efficacy of Letrozole (LE) Combined with Cabergoline (CE) in Comparison to LE alone in ovulation induction among patients with Polycystic Ovarian Syndrome (PCOS) and Hyperprolactinemia (HP)

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PCOS is that the commonest explanation for anovulatory infertility. Polycystic ovary syndrome (PCOS) may be a hormonal disorder common among women of reproductive age. Women with PCOS may have infrequent or prolonged menstrual periods or excess male hormone (androgen) levels. The ovaries may develop numerous small collections of fluid (follicles) and fail to regularly release eggs. Up to 64% of girls with mild HP fulfill modified Rotterdam diagnostic criteria for PCOS. HP affects hypothalamic-pituitary-ovarian axis causing anovulation. The explanation for polycystic ovary syndrome isn't well understood, but may involve a mixture of genetic and environmental factors. Symptoms include menstrual irregularity, excess hair growth, acne and obesity. Treatments include contraception pills to regularize periods, medication called metformin to stop diabetes, statins to regulate high cholesterol, hormones to extend fertility and procedures to get rid of excess hair. there's currently no cure for PCOS, and it doesn't get away on its own. Even after menopause, women with PCOS often still have high levels of androgens also as insulin resistance. this suggests that the health risks related to PCOS are lifelong. Doctors do not know exactly what causes PCOS. They believe that prime levels of male hormones prevent the ovaries from producing hormones and making eggs normally. Genes, insulin resistance, and inflammation have all been linked to excess androgen production. PCOS may be a problem with hormones that affects women during their childbearing years (ages 15 to 44). Between 2.2 and 26.7 percent of girls during this age bracket have PCOS many ladies have PCOS but don't realize it . In one study, up to 70 percent of girls with PCOS hadn't been diagnosed).PCOS affects a woman's ovaries, the reproductive organs that produce estrogen and progesterone — hormones that regulate the cycle . The ovaries also produce alittle amount of male hormones called androgens. The ovaries release eggs to be fertilized by a man's sperm. the discharge of an egg monthly is named ovulation. FSH (FSH) and LH (LH) control ovulation. FSH stimulates the ovary to supply a follicle — a sac that contains an egg — then LH triggers the ovary to release a mature egg.CE, a dopamine receptor agonist, inhibits prolactin secretion and may cause better ovulatory response in those patients. A dopamine agonist may be a compound that activates dopamine receptors. There are two families of dopamine receptors, D₂-like and D₁-like, and that they are all G protein-coupled receptors. D₁- and D₅-receptors belong to the D₁-like family and therefore the D₂-like family includes D₂, D₃ and D₄ receptors. Most antipsychotics are dopamine antagonists, and intrinsically they need found use in treating schizophrenia, manic depression , and stimulant psychosis. .LE, an aromatase inhibitor, without adverse effects on endometrium & induces fewer mature follicles with less risk of OHSS. Our study aim was to research effects of combined LE and CE as compared to LE alone on ovulation & clinical pregnancy rates in PCOS patients with HP.

METHODS: a complete of 1 eighty women with PCOS were enrolled during a hospital based clinical test and randomly allocated into two groups (A&B). Participants of 22-38 years old and every one were with a serum prolactin > 32 ng/ml. Patients during a group (92) got LE, 5mg from day cycle 3-7/3 cycles

additionally to CE, 0.5mg weekly for 12 weeks. Those in group B(88) received only LE, same dose & duration. All patients were matched for his or her age and body mass index. Exclusion criteria: other causes of HP. Main outcome measure was rate of ovulation and detection of both chemical & clinical pregnancies by estimation of β hCG and ultrasound detection of fetal cardiac activity, 2-4 weeks after missed period. Follow-up period was for six months. Statistical analysis of knowledge performed using SPSS version for windows. P-value considered significant if < 0.05 .

RESULTS: Three patients from A and five from B had drug side effects and were excluded from the study. None of the patients in either group were lost during the follow-up period. In A, difference between mean serum level of prolactin before & after treatment was statistically significant (P<0.05). **CONCLUSIONS:** The combination of LE & CE is superior to LE alone in management of anovulatory patients with PCOS and should be used as the first-line treatment for them.

Keywords: Polycystic Ovarian Syndrome, Letrozole, Cabergoline