

# EFFECT OF VAGINAL SILDENAFIL ON THE ENDOMETRIUM OF CLOMIPHENE CITRATE INDUCED PATIENTS

Tamer Mamdouh Abdeldayem, Tarek Mokhtar Toppozada, Lamia Fathy Eid Ramadan Syam  
Department of Obstetrics and Gynecology, Faculty of Medicine, Alexandria University

## Introduction

Sufficient endometrial thickness is markedly essential for occurrence of successful implantation and pregnancy continuation. Adequate uterine blood flow is necessary for endometrial growth, and it is hormonal dependent. Clomiphene citrate is first drug of choice for ovulation induction in PCOS women. Clomiphene citrate has anti-estrogenic effect on endometrial development and leads to diminish endometrial blood flow. Sildenafil citrate is a specific type of phosphodiesterase inhibitor 5, improves the vasodilatation effects of nitric oxide (NO) on blood vessels and smooth muscle. Sildenafil citrate boosts estrogen-induced endometrial growth and can improve uterine blood flow.

## Aim of the work

The current study aimed to evaluate efficacy of vaginal sildenafil citrate during ovulation induction with clomiphene in PCOS women as regards endometrial thickness and pregnancy rate.

## Patients and Methods

Prospective case-control study was conducted on 80 PCOS patients attending infertility clinic at El Shatby University Hospital of Alexandria University. The patients were randomly divided into two groups. Sildenafil group (40patients) received 50mg clomiphene twice daily, and vaginal sildenafil 50mg twice daily. Control (40pt) received 50mg clomiphene alone. Transvaginal ultrasound assessment of the endometrium was when one dominant follicle reached size more than 18mm in diameter. Recording the clinical pregnancy rate was done.

## Results

The current study showed statistically significance increase in mean of endometrial thickness in sildenafil group ( $8.85 \pm 1.09$ ) more than control ( $8.30 \pm 1.01$ ) with p value of 0.020. Also, there was increase in mean of number of dominant follicle ( $1.78 \pm 0.77$ ) more than that of control ( $1.40 \pm 0.67$ ). The current study show statistically insignificant increase in clinical pregnancy between two group, clinical pregnancy was positive in 12 (30%) pt in the case group and in 11 (27.5%) pt in the control group with p value of p value 0.805.

## Conclusion

Vaginal sildenafil can be used at least once with clomiphene in cases of clomiphene failure before changing to gonadotropin therapy in patients with thin endometrium.



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