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P137. Effect of Tadalafil on endometrial thickness, receptivity in assisted reproduction cycles and its reproductive results

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Context: Tadalafil is a type 5 phosphodiesterase inhibitor that improves uterine artery blood flow by potentiating nitric oxide on vascular smooth muscle and, lowering flow impedance with subsequent endometrial growth. Tadalafil may enhance endometrium thickening, embryo implantation and sustain an adequate blood supply. Multiple studies have demonstrated the utility of Sildenafil in assisted reproduction cycles, however information on the effects and experience with the use of Taladafil is scarce.

Objective: To demonstrate the improvement of endometrial receptivity through lowering flow impedance and regulation of smooth muscle contraction by administering Tadalafil in assisted reproduction cycles and correlating endometrial thickness with pregnancy outcomes. To determine the presence or absence of adverse outcomes with the use of Tadalafil.

Methods, patients and interventions: we conducted a prospective, case control study where we reviewed 488 cycles (187 patients) from January 2009 to September 2017 in which our primary outcome was to achieve positive b-hCG and live birth. In 364 cycles we administered a Tadalafil tablet (10mg) every 72 hours at the beginning of the stimulation with a total of 10 doses, the other 124 cycles were left without Tadalafil. Endometrial thickness was measured on the day of the embryo transfer or on the last dose of stimulation. We correlated endometrial thickness and reproductive results based on the use of Tadalafil.

Results- We reviewed a total of 488 cycles (187 patients), on 364 cycles (study group) we administered Tadalafil in which 110 (30.2%) resulted in pregnancy and 254 (69.8%) were negative. On the control group 124 cycles tested without Tadalafil, 20 (16.2%) resulted in pregnancy and 104 (83.8%) were negative. There was a statistical difference between groups (odds ratio 95%, with an interval confidence of 0.003). Implantation rate and biochemical pregnancy rates were higher in the tadalafil group with an (odds ratio 95%, with an interval confidence of 0.002). The endometrial thickness was significantly higher in the tadalafil group (odds ratio 95%, with an interval confidence of 0.005).

Conclusions- Based on our results Tadalafil is useful for endometrial growth and receptivity on assisted reproduction cycles. Thicker endometrial linings were associated with increased pregnancy and live birth rates.

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