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## USE OF PRP (PLATELET RICH PLASMA) WITH PLATELET DEGRANULATION IN OVARIAN REJUVENATION FOR FAILED IVF ATTEMPTS AND POOR RESPONDER PATIENTS

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**PROBLEM STATEMENT:** PRP is a new promising regenerative therapeutic application which can offer therapeutic benefits without detrimental side effects as it is a direct product of own blood sample. PRP has been employed in several fields of medicine: from plastic surgery, maxillo-facial surgery, dental surgery, orthopedics, eye surgery and gynecology. PRP is highly rich in several growth factors and so it have cell proliferative effects as well as anti-inflammatory effects while working on tissue repair. The main ones include epidermal growth factor, vascular endothelial growth factor, transforming growth factor beta 1 and 2, interleukin 10, several classes of platelet-derived growth factors. More recently, clinical trials have demonstrated that PRP can have many beneficial effects in the field of infertility through its regenerative effects. Autologous ovarian PRP treatment could result in successful management of poor responders patients with failed IVF attempts, poor oocyte yield and poor embryo quality.

**METHODS:** We have started offering ovarian PRP applications for 27 patients between 40 and 45 years old with: IVF failures, poor oocyte yield and POF (Premature Ovarian Failure). Ovarian PRP is programmed approximately in 8-10 day of menstrual cycle. PRP was prepared from autologous blood using RegenACR kit according to manufacturer's instructions and subsequently 1 cc of PRP was infused on ovaries using a 20-21 G needle under transvaginal ultrasound guidance. We was used different concentrations of PRP according to the level of ovarian hyporesponsiveness.

**RESULTS:** Following PRP treatment, patients were monitored by both ultrasound and hormonal profile and following their upcoming menstrual cycle, ovulation and presence of follicle: 5 of these patients with AMH between 0.2-0.4 and previous IVF failures achieved pregnancy.

**CONCLUSION:** To verify action of this treatment we attach importance to presence of dominant follicle in 8-10 day of cycle; we also check the hormonal profile of FSH and E2 in 3rd day of menstrual cycle. The results of ovarian PRP are promising because 20 patients of 27 achieving a regular ovulation within 6 months of the treatment: 5 of them realized physiological pregnancy and 1 of them resulted in a successful live-birth following caesarean section of a healthy girl. To women achieved a pregnancy after PRP treatment, every homologous hope had been denied: all of them had an indication for egg donation from other fertility centers.