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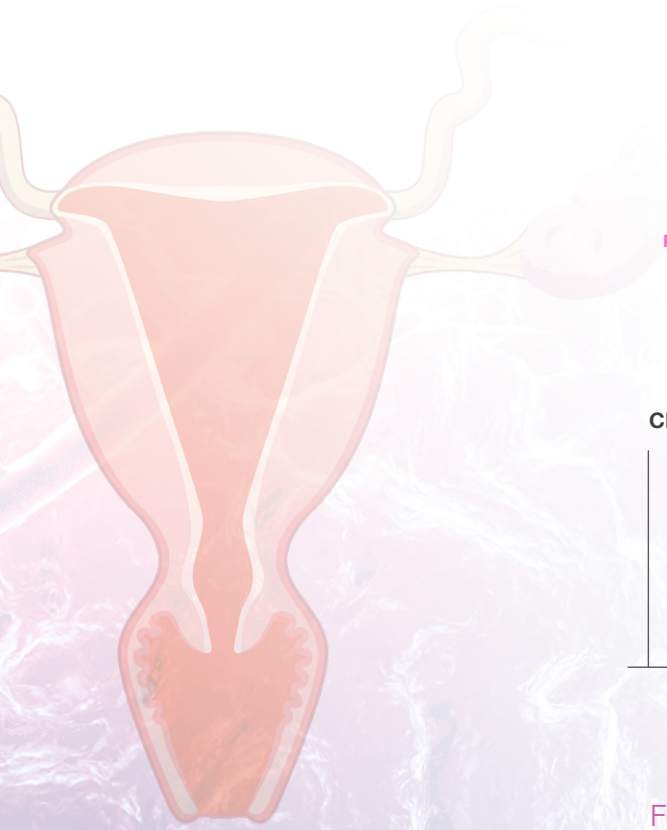
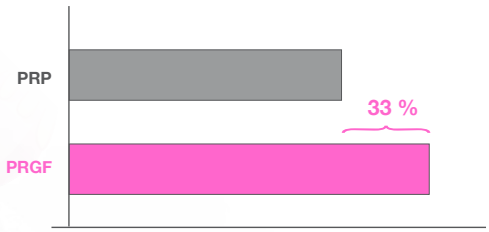
ENDOMETRIAL THICKNESS

THE COMPARATIVE STUDY OF PLATELET RICH PLASMA (PRP) AND PLASMA RICH IN GROWTH FACTOR (PRGF) IN ENDOMETRIAL THICKNESS, IMPLANTATION RATE AND PREGNANCY OUTCOMES IN IVF PATIENTS

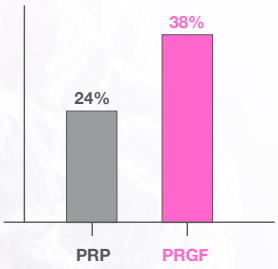
PRGF IS MORE EFFECTIVE THAN PRP IN IMPROVING ENDOMETRIAL GROWTH AND ACHIEVING HIGHER IMPLANTATION AND PREGNANCY RATES



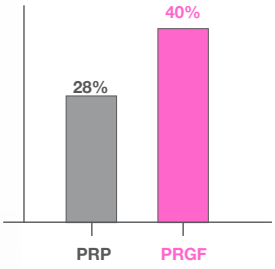
INCREASE IN THE ENDOMETRIAL THICKNESS



CLINICAL PREGNANCY



IMPLANTATION RATE



PLATELET-DERIVED GROWTH FACTORS FOUND IN PRGF, HELP REPAIR ENDOMETRIAL TISSUE BY STIMULATING THE PROLIFERATION, MIGRATION, AND INVASION OF ENDOMETRIAL STROMAL CELLS

Khan M, More A, Anjankar N. The Comparative Study of Platelet Rich Plasma (PRP) and Plasma Rich in Growth factor (PRGF) in Endometrial Thickness, Implantation Rate and Pregnancy Outcomes in IVF Patients. J. Pharm. Bioallied Sci. 2025.

ABSTRACT

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The comparative study of Platelet Rich Plasma (PRP) and Plasma Rich in Growth factor (PRGF) in Endometrial Thickness, Implantation Rate and Pregnancy Outcomes in IVF patients

BACKGROUND

Platelet-rich plasma (PRP) and Plasma Rich in Growth Factors (PRGF) are promising regenerative therapies aimed at enhancing endometrial thickness and improving in vitro fertilization (IVF) outcomes. This study aims to assess the impact of PRP and PRGF on endometrial development, implantation success, and pregnancy rates in IVF patients. A total of 10 ml of venous blood will be drawn from participants and processed to isolate platelets. PRP will be prepared through centrifugation to concentrate platelets, while PRGF will be generated using a leukocyte-poor method and activated with calcium chloride. Endometrial thickness (EMT) will be measured via transvaginal ultrasound (TVS) on the fifth day of the menstrual cycle. If EMT is below 7 mm, PRP or PRGF will be administered, with additional treatments as needed. The study will compare endometrial response, implantation rates, clinical pregnancy rates, and live birth rates between the PRP and PRGF groups. Additionally, safety and potential side effects will be closely monitored to ensure patient well-being.

OBJECTIVES

The study will assess the impact of PRP and PRGF on endometrial thickness and compare pregnancy outcomes, including clinical pregnancy rates in patients treated with either PRP or PRGF. The study will also evaluate the safety of these treatments and identify any adverse effects associated with them.

MATERIALS AND METHODS

thickness. If it's less than 7 mm, PRP will be injected into the uterine cavity using a PRP catheter. EMT will be reassessed after 48 hours, with additional PRP if needed. Embryo transfer will occur only when EMT reaches 7 mm, using the GnRH antagonist protocol. If EMT exceeds 7 mm during ovarian stimulation, no PRP will be given. After one week of estrogen administration, 1 ml of PRGF will be injected under ultrasound guidance. Three PRGF insertions will constitute one cycle, repeated based on endometrial thickness.

RESULTS

Our study demonstrates that PRGF is more effective in increasing endometrium thickness than PRP in patients with thin endometrium.

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