Cryo-Genie INDIA PVT. LTD.

Marketing Office :
G-6, A.C. Market, Vardhman Tower, Vigyan Vihar, Delhi-110092

Cryo PRP-50 THERAPY KIT.

Platelet rich plasma (PRP) applicable is a successful catalyst in the healing process for wide varieties of conditions. **PRP** therapy began gaining popularity in the mid 1990s. Methods of harvesting and using platelets rich plasma are becoming widely practiced in the field of sports, dentistry, orthopedics, traumatology, general surgery, dentistry, dermatology and cosmetology and aesthetic medicine.

Main function is homeostasis by attaching to any breach in vessel where platelets aggregate, activate and release granules. Alpha granules contains clotting mediators such as factor V,factor VIII, fibronectin, platelet-derived growth factors,and chemotactic agents. Delta granules, or dense bodies ,contains ADP, calcium, serotonin, which are platelet-activating mediators. Activated platelets release granules by exocytosis which contain more than 60 different biologically active substances that are involved in the processes of tissue regeneration, angiogenesis, epithelialization, proliferation and differentiation of osteoblasts, and in synthesis of collagen and extracellular matrix of connective tissue.

Material Provided : 1. **Cryo PRP-50** sterile anticoagulant Ampoule 5 ml.
2. PRP Test tubes 15 ml 3 nos Sterile. 3. PRP Transfer pipettes 3 ml One pair .

Other Material Required : 1. Centrifuge 15 ml and/50ml with timer &RPM Meter.
2. Test Tube Stand for 10 ml and 50 ml tubes.

Procedure : 1. Take one or two 15 ml tube as per the need.
2. 1.5 ml anticoagulant to each tube &collect 13.5 ml blood by using scalp vein 18 no. directly to the added tubes. Ratio of 1 ml anticoagulant on need additional number of tubes can be set up. Discard remaining anticoagulant.
3. Cap the tubes tightly and mix well by inversion several times.
4.. Centrifuge for 15 min at 1500 RPM.
5. Plasma rich in platelets will be separated. At least 50 % volume should be plasma on top and there should not be any buffy coat on the RBC layer. If plasma is less, centrifugation needs to be increased and if buffy coat forms, centrifugation needs to be reduced.
6. Transfer plasma to another tube using sterile pipette without picking RBCs. Plasma can be pooled to one tube if possible.
7. Centrifuge at 3500 RPM for 15 min to get platelet pellet. Upper plasma layer should be very clear and should not show any swirling platelets when shaken gently. If swirling seen centrifuge further 10 min to get clear plasma.
8. Leave behind 10% plasma (10% of original blood collected) above the pellet and discard remaining using sterile pipette.
9. Re –suspend the platelet pellet in the remaining plasma using sterile pipette, load syringes/ cannula use immediately.

The procedure will make 7-10 times concentration of platelets in the final preparation compared to blood which will give appropriate quantities of growth factors.

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Cryo PRP-50

Use of Cryo PRP-50 THERPY IN THIN ENDOMETRIUM & IMPLANTATION FAILURE.

Platelet rich plasma (PRP)application is a successful catalyst in the healing process for wide varieties of conditions.PRP was first developed in the 1970 &began gaining popularity in the mid 1990s. Method of harvesting & using platelet rich plasma are becoming widely practiced in the field of sports medicine, orthopedics, traumatology,general surgery, dentistry, dermatology & cosmetology.

Their main function is hemostasis by attaching to any breach in vessel where platelets aggregate, activate and release granules. The platelets granules contains clotting mediators, platelet-derived growth factors, chemotactic agents and platelets-activating mediators. Activated platelets releases not only clotting factors but more then 60 different biologically active substances that are involved in the process of tissue regeneration, angiogenesis, epithelialization, proliferation and differentiation of osteoblast, and in the synthesis of collagen and extracellular matrix of connective tissue.

Adequate endometrial thickness is a main factor for implantation and preganancy. Women with persistent thin endometrium often do not undergo embryo transfer. Several modes of therapies are used for developments of endometrium like estrogens,micronized progesterone,low dose asprin,low dose steroids,G-CSF with variable results. Thin endomertrium non responsive to standard treatment is still a challenge in ART resulting in cycle cancelation & unplanned embryo cryopreservation.

Change et al in 1995 demonstrated effectiveness of PRP infusion for endometrial development. In a small series of patient where they used PRP therapy as intrauterine infusion shows good development of endometrium in majority of cases and led to embryo transfer & pregnancy. PRP improved endometrial regenerating capacity of endometrium. Though it is difficult to assess the clinical efficacy in implantation failure, potential proliferation effect of PRP on endometrium can be sonographically evaluated. Endometrial thickness can be employed as an indicator of efficacy. **Leila Nazri el** al also demonstrated similar effect in another small series of patients.

PRP Product to be used :