

Test & Treatment Options for Repeated Pregnancy Loss (RPL) and Repeated Implantation Failure (RIF)

DETAILED TESTS & TREATMENT OPTIONS

FOR REPEATED PREGNANCY LOSS (RPL) / REPEATED IMPLANTATION FAILURE (RIF)

IMPORTANT NOTE

Only Carried out with specific written consent by couple with full undertaking as evidence is very limited and some of the treatments are controversial.

TESTS in Bold are done in USA (best reproductive immunology lab in the world) at the Rosalind Franklin University, Chicago.

1. MALE

- Semen Analysis
- Semen Culture and Sensitivity
- DNA Sperm Fragmentation
- Sperm Aneuploidy
- FSH, LH, E2, Testosterone (Total and Free), SHBG, Free Androgen Index (FAI), Prolactin, TSH, Free T4

2. ENDOCRINE/ METABOLIC SCREENING

- Free T4
- TSH
- Prolactin
- Testosterone (Free and Total)
- DHEA
- Androgen Profile (Testosterone Free and Total, SHBG, Folic Acid, 17 α -Hydroxyprogesterone (17 α -OHP), DHEA-SO₄)
- Fasting Blood Sugar
- Fasting Insulin
- HbA1c
- Calcium
- Fasting Lipid Profile (high BMI group)

3. IMMUNE SCREENING

- Anti-thyroid Antibodies (thyroid peroxidase, thyroglobulin)
- Anti-phospholipid Antibodies
- Anti-nuclear Antibodies (ANA screen)
- Anti-DNA Antibodies (dsDNA, ssDNA, histones, Scl-70)
- Immunoglobulin Panel (IgG, IgM, IgA) (Mandatory before IVIgG Therapy)
- NK Cell Inhibition Panel
- Reproductive Immunophenotype
- TH1/TH2 Intracellular Cytokine Ratio
- Leukocyte Antibody Detection Panel
- HLA-DQ alpha (Male and Female)
- KIR Genotype

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4. COAGULATION SCREENING

- PT/INR
- PTT
- Activated Protein C Resistance o Antithrombin III
- Protein C o Protein S
- Prothrombin Gene Polymorphism
- Factor V Leiden Gene Polymorphism
- MTHFR C677T Gene Polymorphism
- MTHFR A1298C Mutation
- Factor XIII
- PA1-1 Gene Polymorphism

5. INFLAMMATION/ INFECTION SCREENING

- Cervical/ High Vaginal swab/ Endometrium for microbiology Culture and Sensitivity
- Extended STD (Gardnerella Vaginalis, Chlamydia, Mycoplasma HSV I & II (IgM, IgG), Gonococcus, Treponema pallidum (syphilis), Candida albicans, GB strep
- Urine Culture and Sensitivity
- HPV
- HSV 1 & II (IgM, IgG)
- CMV (IgM, IgG)
- Toxoplasma (IgM, IgG)
- HIV, HbsAg, HCV (Male and Female)
- TB Gold Quantiferon (pre-Humira)
- CPR

6. HEMATOLOGY SCREENING

- CBC
- Hb electrophoresis (Thalassemia, Sickle Cell Disease) if indicated

7. GENETIC SCREENING

- Karyotype (Male and Female)
- Embryo: PGS Full 46 chromosome (High Resolution; Standard Resolution)
- Sperm Aneuploidy
- Sperm DNA Fragmentation

8. LIVER AND KIDNEY SCREENING

- Liver Function Test
- Urea and Creatinine
- Electrolytes (Sodium, Potassium, Chloride, Bicarbonate)

9. VITAMINS SCREENING

- Vitamin D
- Vitamin B12
- Folic Acid

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10. ULTRASOUND

- Midcycle scan for AFC (antral follicle count), Endometrial Normality, Uterine Artery Doppler
- Gel Contrast Scan

11. HYSTEROSCOPY

- During window of Implantation (Natural Cycle; LH +5 to LH +9)/
HRT (18 to 22 day Estrogen 6-8 mg + 5 to 9 day Progesterone)

1 Option

- o Day 1 to Day 25: start Estrogen 2mg tablet TID (orally) then from
- o Day 15 to Day 25 add Duphaston 10mg/ day (orally)
- o Day 18 to Day 22: Hysteroscopy

12. ENDOMETRIAL BIOPSY

- Culture and Sensitivity + Microbiology/ TB
- Histopathology
- Endometrial Immune Profile (EIP)(Chicago test)
- Endometrial Receptivity Array (ERA)-NGS

13. FERTILITY IMPROVING SURGERY

- Myomectomy
- Polypectomy
- Endometrioma Excision
- Hydrosalpinges- Excision or clipping

14. MEDICATION (used with specific consent by couple's full undertaking)

IMMUNE STIMULATION +/- *THROMBOPROPHYLAXIS

- Antioxidants (Male and Female)
- Nutrients (Male and Female)
- Endometrial Scratching
- Timed Coitus (Exposition to several plasma)
- High Dose Progesterone
- Neupogen
- Dydrogesterone
- Pregnyl

IMMUNE SUPPRESSION +/- *THROMBOPROPHYLAXIS

- Intralipid
- Steroids
- Humira (very high Th1; Th2): Allergic to Intralipid
- No exposition to seminal fluid

***Thromboprophylaxis:** Low Dose Aspirin (LDA), clexane, calcium 1gram, vitamin D 1000IU/ day

- Vasodilator: Low Dose Aspirin (LDA), sildenafil, vitamin E, niacin (vitamin B3), glyceryl trinitrate (GTN) patches, nifedipine
- Tocolytics: Atosiban, IM progesterone, Dydrogesterone, glyceryl trinitrate (GTN) patches, Nifedipine



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15. Miscellaneous- Very Low-Quality Evidence based

(used with extreme caution in research setting and with written consent from Couple taking all responsibility for consequences of testing and treatments)

- For Poor Ovarian Reserve:

Ovarian PRP injections. Testosterone supplements

- For poor quality endometrium:

Endometrial PRP and or Neupogen injections/Instillations

- For Poor Uterine Artery Blood Flow:

Vaginal Sildenafil/GTN

- For Reproductive Immune dysfunction not responding to Intralipid/Steroids

IVIgG infusions

Humira SC