

# PRP with Extracellular Matrix for Hair Restoration

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R3 Seminar



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# Objectives

- ◆ Recognize need for variety of treatment options
- ◆ Identify who is a candidate for PRP for Hair Restoration
- ◆ Review Evaluation of Patient
- ◆ Review PRP Procedure
- ◆ Review Post Procedure follow up and treatment

# Candidates for PRP

- ◆ Male and Female pattern baldness (Androgenic Alopecia)
- ◆ Telogen Effluvium
  - ◆ Post Pregnancy
  - ◆ Post surgery (ie Bariatric)
- ◆ Post chemotherapy
- ◆ Hormonal Imbalance (best if hormones are optimized)
- ◆ \*\*Avoid in patients with low Plts or on Anticoagulants (Plavix)
  - ◆ Check for petechiae or bruises

# Initial Evaluation

- ◆ OMG Hair Restoration Program
  - ◆ Baseline pictures and scalp high magnification pictures (if possible)
  - ◆ Medical history and past treatments
  - ◆ Hair Check: tool that measures hair density objectively
- ◆ Schedule PRP with avoidance of meds/supplements that alter platelet function for at least 1 week (NSAIDS, fish oil etc.)

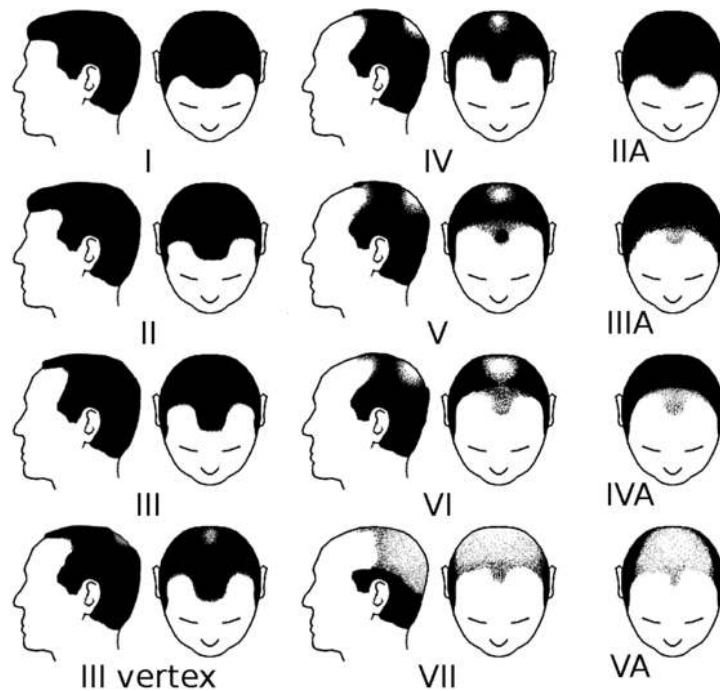
# Initial Consultation

- ◆ Hair loss history
  - ◆ What have they tried in past?
    - ◆ Shampoo
    - ◆ Laser device
    - ◆ Vitamins/supplements
    - ◆ Prescriptions (Dutasteride or Finasteride)
    - ◆ OTC minoxidil

# Hair Consultation continued

- ◆ Assess current degree of hair loss (Norwood Scale for men and Ludwig Scale for women) and main areas of concern
- ◆ Medical history review and major health events i.e. surgery
- ◆ Genetics
- ◆ Psychosocial effects
- ◆ Goals

# Norwood Scale





# Ludwig Scale



# Objective Measures

- ◆ Photographs
  - ◆ Front face forward and chin down
  - ◆ Side
  - ◆ Back
  - ◆ Both sides



# Objective Measures-Hair Check

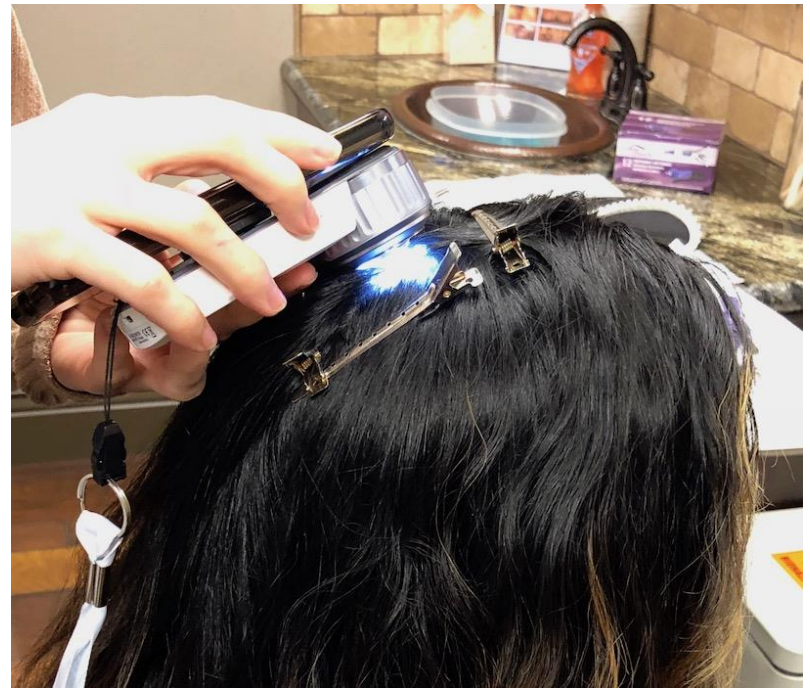




# Hair Check cont



# Hair Check cont



# Treatment Plan

- ◆ Establish which treatment plan is for them within budget and expectations
- ◆ Follow up every 3 months with pictures
- ◆ Add adjunctive therapy as needed

# Hair Loss

- ◆ Androgenic: DHT causing miniaturization of hair follicle
  - ◆ Millions of men and women affected
  - ◆ 90% of alopecia
- ◆ Inflammatory: Alopecia Areata
- ◆ Hormonal: low thyroid, post pregnancy



# Why Platelet Rich Plasma (PRP)?

- ◆ PRP delivers platelets which deliver growth factors and chemotactic factors to the hair follicles once activated
  - ◆ Decrease damage caused by inflammation
  - ◆ Stimulate stem cells at base of hair follicle
  - ◆ Attract other stem cells to help regenerate dormant follicles



# Addition of Extracellular Matrix to PRP

- ◆ Extracellular Matrix products enhance the PRP even further by improving outcome
- ◆ Decrease the number of procedures required
  - ◆ One procedure can improve hair growth from 9-18 months afterwards
- ◆ Improved patient satisfaction

# Double Spin PRP Processing

- ◆ PRP Definition: volume of autologous plasma that has platelet concentration above baseline depending on patient's own blood cell count (nl 150k-450k per mcL)
- ◆ Therapeutic PRP: minimum platelet count of 1 billion platelets per mL to achieve results
  - ◆ Research supports 5X normal platelet is ideal
  - ◆ The higher the platelet count the more Stem Cells migrate and proliferate
- ◆ Most common reason for variable results
- ◆ Double spin increases concentration PLUS helps eliminate neutrophils from the PRP which can be counterproductive

# PRP Procedure

- ◆ Prepare PRP according to instructions from double spin kit (Pure Spin)
  - ◆ Add ECM just before injecting subcutaneously
- ◆ Achieve best anesthesia possible using ring scalp block
  - ◆ Dental syringe and Septocaine
  - ◆ Use vibrating device at injection site to help block pain from injections
- ◆ Scalp washed with chlorhexidine and sprayed with antiseptic (ie Anasept)

# PRP Procedure continued

- 💧 If patient has Laser Cap, instruct patient to use for 15 min prior to procedure
- 💧 Place patient where scalp is easy to access but patient is comfortable
- 💧 Drape patient and wrap gauze around scalp to prevent fluid from dripping onto face/eyes
- 💧 Inject ~0.1mL PRP with ECM subcutaneously in 1 cm sections horizontally across scalp concentrating in problem areas

# PRP Procedure continued



# PRP Procedure continued

- ◆ Follow with another pass in similar fashion with Platelet Poor Plasma (PPP) with Calcium Gluconate and Dexpanthenol
  - ◆ This now activates the platelets and infuses the hair follicles with vitamins and other growth factors left behind in PPP
  - ◆ Decreases chances of clot formation in PRP injections

# PRP Procedure continued



# PRP Procedure continued

- ◆ Final step is using microneedle pen applied as a light stamp not circular
  - ◆ This avoids severing hair follicles
- ◆ Use left over PPP as a lubricating fluid during microneedling
- ◆ Any PPP remaining is massaged into scalp as a final liquid sealant



# PRP Procedure continued

- ◆ Final spray with antimicrobial spray and remove any traces of blood from patient
- ◆ Instruct patient to use Laser Cap for additional 15 minutes after procedure
- ◆ Review post procedure care
  - ◆ Avoid fish oil, NSAIDs for 2 weeks
  - ◆ Acetaminophen is ok
  - ◆ Sleep upright for 1-2 nights to avoid asymmetric swelling of forehead area

# Post Procedure

- ◆ Schedule follow up in 3 months with additional pictures
- ◆ May have initial “hair shock” after procedure as hairs shed to make room for new stronger hair
- ◆ Start or continue any medications for hair loss
  - ◆ Topical minoxidil
  - ◆ Topical Finasteride or Dutasteride
  - ◆ Spironolactone
  - ◆ Latanoprost

# Post Procedure continued

- ◆ Start or continue supplements
  - ◆ High quality multivitamin with biotin
  - ◆ Saw Palmetto
  - ◆ Viviscal (AminoMar marine complex plus other nutrients)
- ◆ Start or continue special hair care
  - ◆ Shampoo/Conditioner without sulfates or other harsh chemicals which can irritate hair follicle and increase inflammation

# TL 35 y/o female with Alopecia Areata- 4 month post PRP with ECM



# TL continued





# TL continued



# RS 54 y/o male with Androgenic Alopecia – 8 months post PRP with ECM



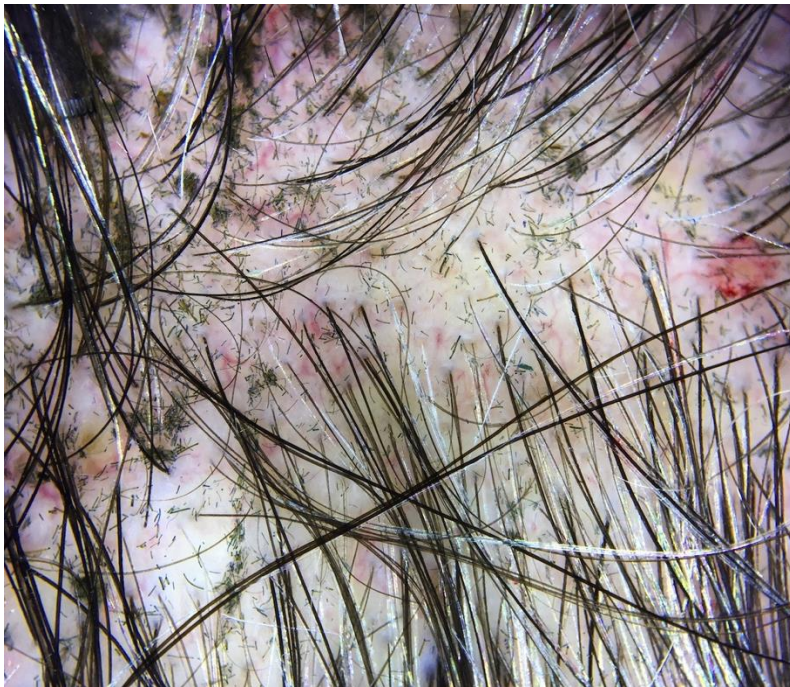


# RS continued

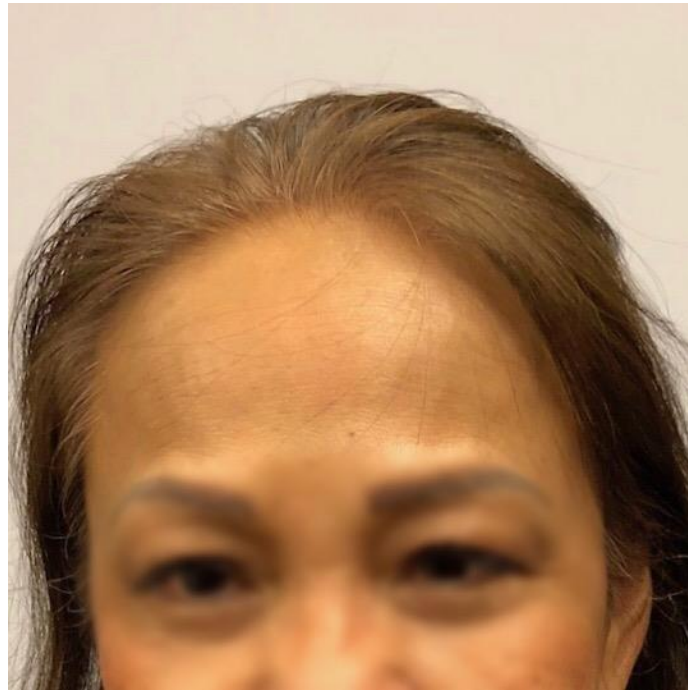




# RS continued



# NG 65 y/o s/p Ovarian Cancer Chemo Tx – 8 months post PRP with ECM





# NG continued



# NG continued



# Thank you!

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💧 R3 Stem Cell