

PLATELET RICH PLASMA

- Current status



INTRODUCTION

Platelet Rich Plasma (PRP) is a newer modality of treatment in the field of dermatology

It has been used extensively in orthopedic and dentistry.

It has become popular among sportsmen- Tiger woods, Rafael Nadal

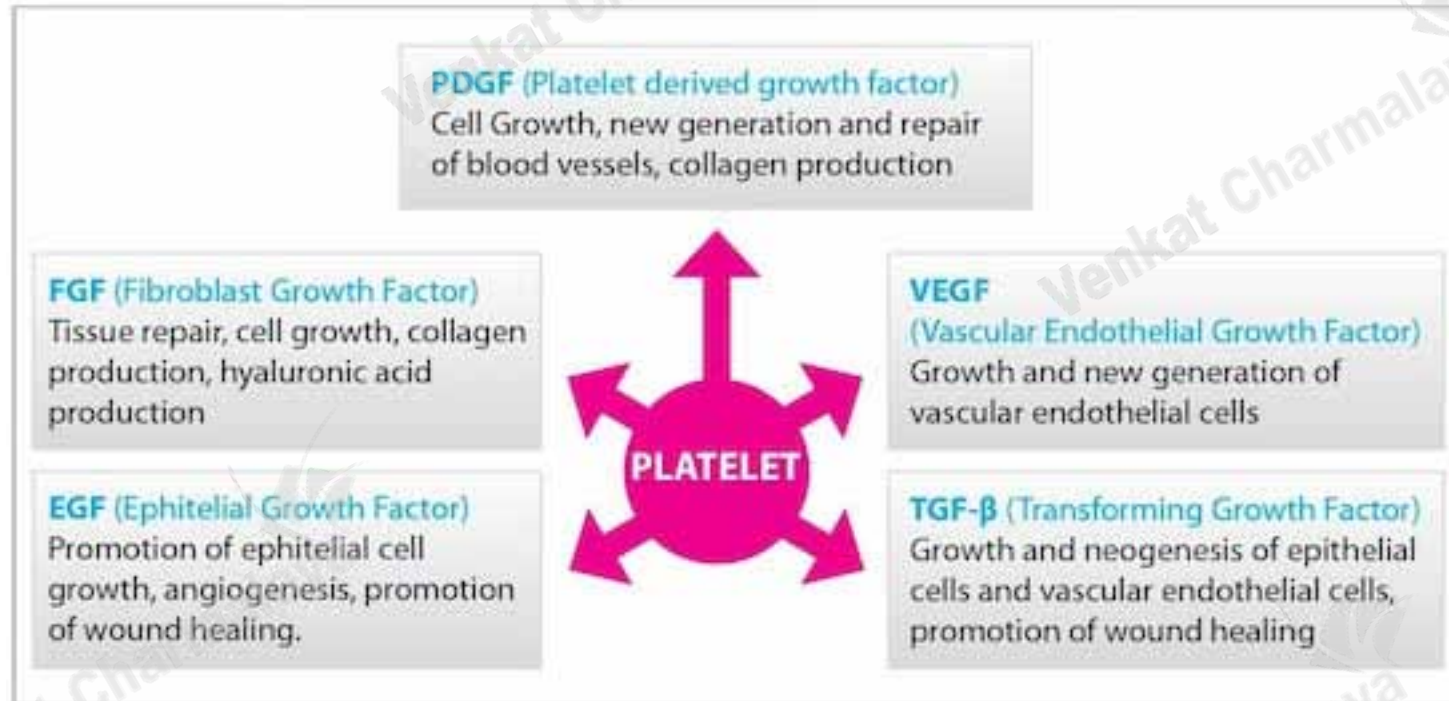


WHAT IS PRP

- ☉ PRP means platelet rich plasma
- ☉ Platelets are cells in blood which secrete growth factors for wound healing
- ☉ These growth factors have multiple effects on skin and hair
- ☉ PRP contains these multiple growth factors (GFs) and plasma proteins



GROWTH FACTORS IN PLATELETS



A Variety of Growth Factors Released from PRP Rejuvenate the Skin from Inside



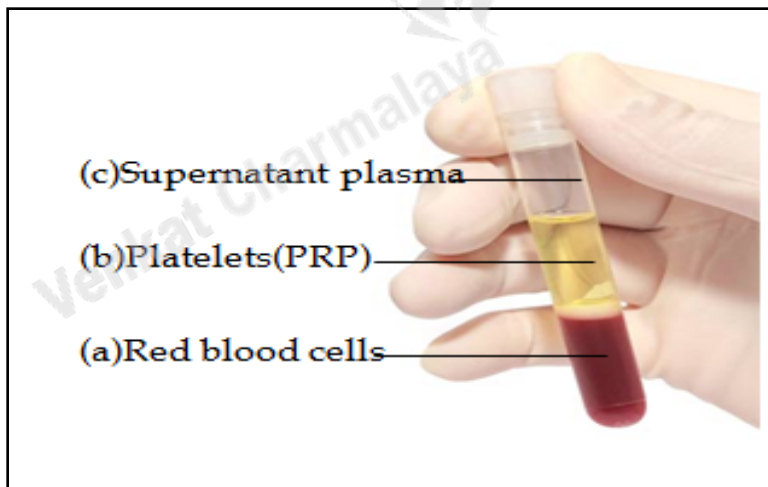
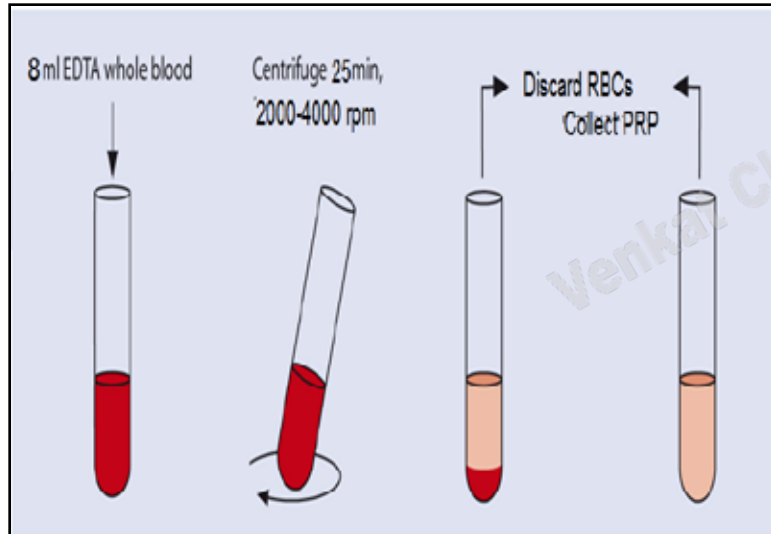
Hence new term for PRP-
REGENERATIVE MEDICINE



INDICATIONS

- ☞ Androgenetic Alopecia(pattern baldness)
- ☞ Skin Rejuvenation
- ☞ Alopecia areata/Telogen effluvium
- ☞ Scars- Striae distensae, Post acne scars
- ☞ Wound ulcers





- ⌘ Step 1 10-15ml of patient's blood is taken
- ⌘ Blood is centrifuged by double-spin method to get high concentration of platelets in laboratory
- ⌘ Calcium chloride added to PRP for activation of platelets prior to treatment
- ⌘ Activation leads to secretion of growth factors
- ⌘ This solution is called PRP which is then put in skin



PROCEDURE

- ⌘ Anesthesia through creams or injection of lignocaine / ice to avoid pain
- ⌘ Method of administration of PRP
 - 1) Direct injections through a syringe at distance of 1cm all over the affected area
 - 2) Applied topically after Microneedling using a dermaroller or motorized dermapen- this is preferred





Microneedling causes pin point bleeding or microtrauma which recruits GFs and stimulates growth repair process

It also reduces the need for multiple painful injections and helps in better uniform absorption of the PRP



PRP IS ONE OF THE TREATMENTS FOR ANDROGENETIC ALOPECIA

☞ Note

PRP is not the treatment of choice nor alternative to medication/surgery.

It is a second line treatment for those who are not fit for surgery or do not want surgery



HOW MANY SESSIONS? HOW OFTEN?

- ☉ It is performed once in 4-6 weeks and for 3-5 sessions
- ☉ HOWEVER THIS IS A NEW TREATMENT AND HENCE STANDARD PROTOCOLS ARE LACKING



WHAT IS THE SUCCESS RATE?

- ☉ OUR SUCCESS RATE HAS SHOWN THAT 60-70% OF PATIENTS SHOW GOOD IMPROVEMENT
- ☉ IT IS USUALLY USED ALONG WITH MEDICINES AND NOT AS SOLO TREATMENT



WHAT IS THE LONG TERM EFFECT?

- ⌘ IT IS NOT YET KNOWN HOW LONG THE RESULT WILL LAST AS IT IS A NEW TREATMENT AVAILABLE ONLY FOR TWO YEARS
- ⌘ MAINTAINCE TREATMENT MAY BE NEEDED ONCE IN 6 MONTHS



HAIR TRANSPLANTATION

- ☉ Can be used with hair transplantation to enhance growth of grafts.



ANTI AGEING/SKIN REJUVENATION

- ⌘ Emerging area of interest in aesthetic medicine
- ⌘ Acts to naturally smooth and tighten the skin. In this way, PRP softens wrinkles and creating smoother skin texture and tone.



SAFETY

- § Till date no major side effects reported or published .
- § Patient's own blood – hence minimum risk of reactivity
- § NO risk of transmission of infections

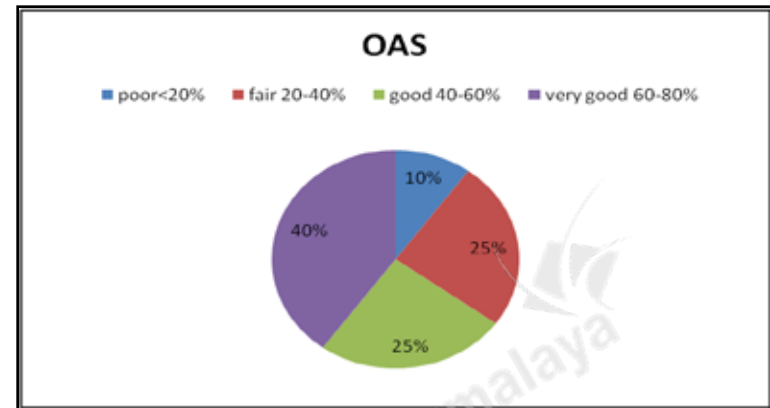
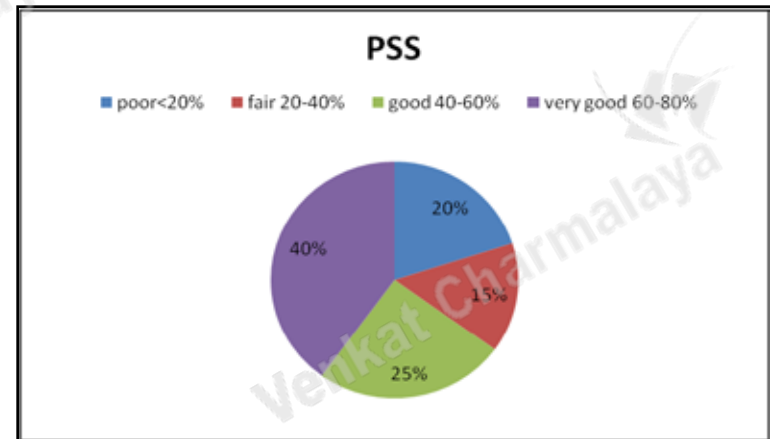
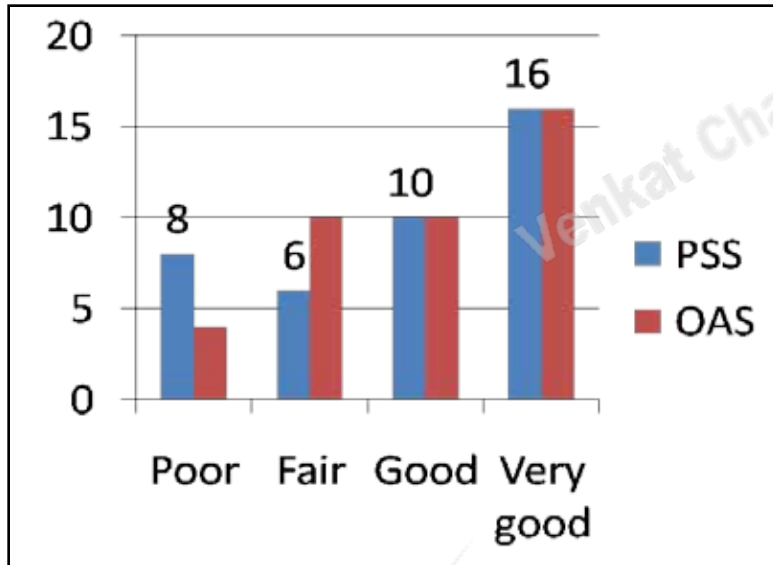


OUR STUDY

- ⌚ 40 patients diagnosed with AGA selected(36 male and 4 female)
- ⌚ Patients who did not respond to topical Minoxidil and oral Finasteride were included
- ⌚ Retrospective Study from Jan 2014 to May 2015
- ⌚ Photographs were taken at each session.
- ⌚ Anesthesia was given for apprehensive patients-
 - a) Ring block on scalp
 - b) Topical EMLA
 - c) Icing
- ⌚ Administration – microneedling with dermapen followed by topical application
- ⌚ No of session-3-6
- ⌚ Interval- 6 weeks



RESULTS



- ⦿ No side effects noted
- ⦿ 26 patients had good to very good results.
- ⦿ Follow up after 6 months showed persistent results except for 3 patients who resumed hair fall after 3 months.

PRP RESULTS

Before



After 5 sessions



Before

After 3 sessions



Before



After 3 sessions



Before

After 3 sessions



Before

After 3 sessions



BEFORE

AFTER 5 SESSIONS



BEFORE

AFTER 3 SESSIONS



BEFORE

AFTER 3 SESSIONS



BEFORE

AFTER 3 SESSIONS



BEFORE

AFTER 4 SESSIONS



BEFORE

AFTER 4 SESSIONS



SUMMARY

- ☉ PRP IS A SAFE PROMISING TREATMENT
- ☉ MULTIPLE SESSIONS ARE NEEDED
- ☉ IT IS AN ADDITIONAL TREATMENT
- ☉ IT IS NOT A REPLACEMENT FOR HT OR DRUGS

