A.P.A.G. “Activated Plasma Albumin Gel“

How Does This Work

In a new wound, platelets are the first cells which arrive. They aggregate to stop the bleeding and then release substances (growth factors, cytokines, chemokines) to activate the healing process in a natural way.

In wounds in which there is no complete healing, the mechanism of release of these substances from platelets may be interrupted.

Healing Process

The wound is first filled by a blood clot, whose meshes of fibrin contain red blood cells and leukocytes; in the surrounding tissue there is a rapid inflammation with exudate formation, fibrin deposits and infiltration of neutrophils.

The inflammation is then followed by the healing process that begins at the margins of the wound where the original tissue is in contact with the blood clot. Macrophages exert an important function because they invade the clot and remove degrading red blood cells, fibrin and cellular deposits.

Guided Healing Method

Most treatments only serve to stanch the wounds and are rarely effective in depth to the interior where healing is stalled. A.P.A.G. + PRP+CD34+ : is a semi-fluid gel with autologous platelets of the patient. it takes the shape and the size of the wound.

This stimulates the formation of new tissue in the entire wound, three-dimensionally and helps to reduce the volume in a short time, reducing the pain, the possibility of infection and thus promoting healing.

What is “A.P.A.G.” Gel

It is derived from a sample of peripheral blood from the same patient; Skin ulcers and wounds that do not heal can have a significant impact on quality of life.

Denaturalized Albumin with: Platelets , Cells CD34+ - autologous healing agents that stimulate the natural auto-healing induced starting from the wound bed with slow "Biphasic" release - prolonged by growth factors.

^ Gel- Plasma rich of platelets (PPP Denaturalized Albumin A.P.A.G. + PRP + CD34+) for the treatment of chronic wounds and other.

^ It can be used for the treatment of exudative wounds, ulcers of the upper-lower extremities, pressure sores and diabetic ulcers.

^ It is a “Scaffold” of natural fibrin (derived from plasma) which acts as a scaffold for the adhesion of new cells.

^ The results are visible in a few days and not weeks.

^ Promotes the healing process of wounds from post surgical trauma.

^ It helps to manage mechanically or surgically debrided wound (helps healing).
Ulcers in Diabetics

Closed Wounds

With the use of A.P.A.G. and autologous growth factors PRP and CD34+, the healing 81,3% of the cases – 7 cm² diabetic ulcer recovered in 6,2 weeks.

Without the use of autologous growth factors, the healing is 42,1% of the cases – 7 cm² diabetic ulcer recovered in 32 weeks.

Reduction from baseline in less than 1 month - healing 2/3 months maximum of recurrent ulcer 1 year-chronic

Effective in diabetic foot of 1st and 2nd grade.

A.P.A.G.

It's simple and quick to prepare and apply, can be applied in the Doctors Office.

The doctor takes a small amount of peripheral blood of the patient with sterile vacuum tubes without exogenous substances, using the separator of blood components "Medifuge" after about 14 min (separation occurred) we notice three components.

It is taken from the tube, with different syringes:

Interface 0,7 ml CD34+
Interface 2 ml PRP
Remaining 2 ml PPP

Take 1ml PPP in syringe of 2,5 ml and insert into the anti-static and anti-magnetic heating denaturizer; you get the denaturalization of albumin after 10/12 minutes, then let stand the content of the syringe in the absence of heat and absence of direct light for 10 minutes and you get APAG.

Mix 1ml of A.P.A.G. with 0,3 ml CD34+, 0,2 ml PRP, 0,2 ml ascorbic acid, mix for 30 steps syringe to syringe using the 3-way mixer.

The gel is applied over the entire wound, which will then be covered with an autologous membrane. The autologous membrane is always obtained from the same blood sample and same separation process: the blood collected is placed in a sterile vacuum tube different from the previous.
With red test tubes we can obtain a separation in solid phase, from which a membrane is formed; strong, elastic and sutureable of about 1.5 x 2.5 cm.

The membrane stimulates the growth of the epithelium on the wound. In no compressive bandage, the membrane accompanies and helps to overcome the inflammatory process.

Membrane Effects

^ Antipyretic: it gives relief without burning
^ Analgesic: it reduces pain, even in depth
^ Moisturizing: it promotes blood fluid retention in the tissues
^ Fungicidal: it inhibits the growth of fungi
^ Hemostatic: it reduces bleeding
^ Bactericidal: it hinders the growth of bacteria
^ Virustatic: it hibits the growth and development of virus
^ Detoxifying: it helps the tissue detoxification from previous chemical and pharmacological treatments
^ Proteolytic and Cicatrizant: it enzymatically dissolves and absorbs dead or damaged cells, stimulating the regeneration process

Applications

A.P.A.G. – PRP – CD34+, in 10 days - 45/50 years old patient - “3 applications”
A.P.A.G. – PRP – CD34+, in 10 days - 51/61 years old patient - “3/4 applications”
A.P.A.G. – PRP – CD34+, in 10 days - 65/80 years old patient - “5 applications”

Growth of granulation tissue in 7 days = 50% contrition wound – volume reduction of 90%.

Matrix for definitive closure with an excellent nutritional support

Performed 2 times per week for 8 weeks to 12 weeks.

A process of new cells and differentiation into specialized structures of the tissue itself, originates from the healing tissue (which constitutes an important barrier against infection).

The final result of the healing process depends on the relative contribution of the repair and regeneration; if the wound suffers a microbial contamination during this process has much less chance of healing that is prolonging the stage of infection.
Contraindications

Do not perform on patients who are under chemotherapy, malignancy in the wound area, Emoglabina 10.5 g / o / l, Serum albumin 2.5 g / or / l, Platelets 100x10 g / l, Wounds declared clinically infectious.

Application in Aesthetic - Cosmetic and Surgical, Odonto Dental and Maxillo - Facial. etc. will follow.

Autologous Components

After the separation with Medifuge, aspire with different syringes the different components:

1) Syringe with CD34+, 0.7 ml per tube
2) Syringe with PRP, 2 ml per tube
3) Syringe with PPP, 2 ml per tube