USMF „NICOLAE TESTEMIȚANU"
CONFERINȚA ȘTIINȚIFICĂ ANUALĂ
CERCETAREA ÎN BIOMEDICINĂ ȘI SĂNĂTATE: CALITATE, EXCELENȚĂ ȘI PERFORMANȚĂ
20 22 octombrie 2021

OUTCOME OF USING PLATELET RICH PLASMA IN POSTEXTRACTIONAL WOUND TREATMENT.

Axenti Catalina-Francesca[1] , Motelica Gabriela[2] Scientific adviser: Chele Nicolae[1]
[1] Department of Oro-maxillo-facial Surgery and Oral Implantology „Arsenie Guțan"
Nicolae Testemitanu SUMPh;

Introduction

Platelet-rich plasma (PRP) is an autologous blood-derived product that contains a high concentration of platelets in plasma. It is derived from whole blood by centrifugation. Activated platelets in PRPstimulates bone regeneration, enhances regenerative processes and postoperative wound healing, thus simplifying future implant-prosthetic rehabilitation. PRP promotes re-epithelialization by regulating the biological function of epidermal stem cells (ESCs) and significantly promotes angiogenesis of wound tissue. PRP promotes wound contraction and stabilizes the collagen arrangement.. Because of its simple preparation, high growth factor content and low immunogenicity, PRP has been widely used in various surgical operations and clinical treatments and has shown promising experimental and clinical effects in wound healing.

Keywords

PRP, autologous biomaterial, regeneration, extraction, postoperative wound

Purpose

Evaluation of Platelet-rich plasma properties in postextractional wound regeneration.

Material and methods

The anamnestic data were collected for a
39-year-old patient, accusing throbbing pain at the level of tooth 3.8. The clinical examination- inspection and palpation and paraclinical examination-panoramic radiography and VAS test were performed. The diagnosis and treatment plan were established, as follows: extraction associated with PRP injection.

The determination of PRP injection efficacy will be performed based on the following values:

- Facial edema
- Pain / comfort score based on VAS test
- Tissue regeneration

Results

The study of clinical and paraclinical data of patients indicates that the use of PRF in postextractional wound stimulates bone and tissue regeneration, shortens the duration of osteogenesis and prevents post-extraction complications.At the postoperative evaluation of the patient after 7 days of treatment, the intensity of pain according to the modified VAS method showed decreased values- from 4 to 1, the postextractional wound was completely healed, the level of regeneration was attested by the absence of dehiscence, presence of the pale pink epithelium, absence of the postoperative facial edema according to the craniometric points, the Celsius signs also were absent.

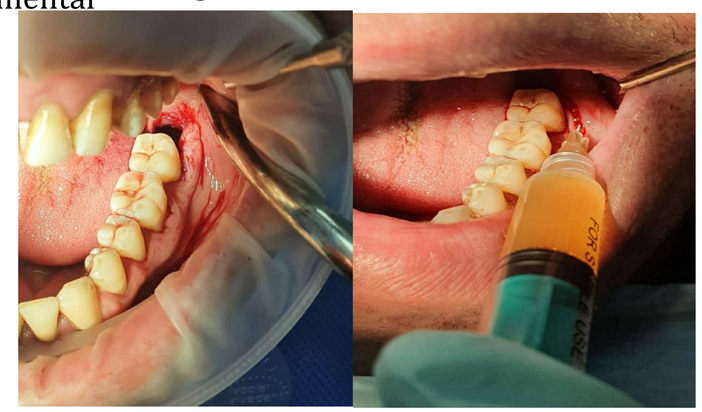

Fig.1. The aspect of postextractional alveolus and injection of PRP

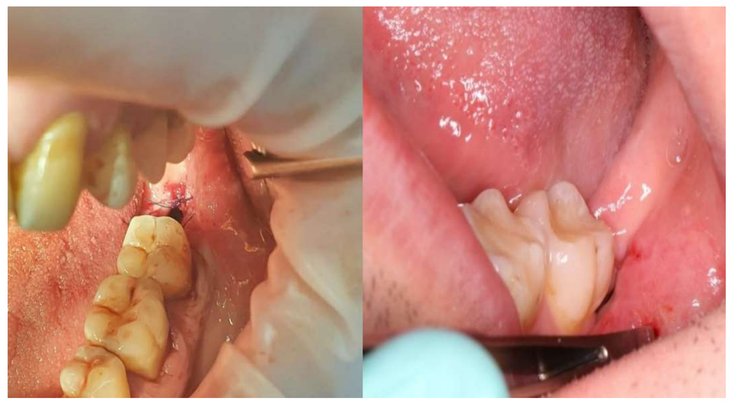

Fig.2 The endobucal aspect of the postopeative wound after applying the suture and at 7th day

Conclusions

Theangiogenesis and local immune function, so platelets play an important role in hemostasis and healing processes. It greatly enhances reepithelialization, induces angiogenesis and is also involved in wound contraction and collagen deposition.The use of PRP biomaterial use of platelet-enriched fibrin autologous biomaterial brings positive results in improving in wisdom tooth extraction is a minimally invasive method of tissue regeneration that reduces the rehabilitation period and prevents the occurrence of post-extraction complications.