



Critically Discuss and Analyze the Factors that can Affect Bone and Soft Tissues Wound Healing

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Abstract

In the provided review, the information related to the factors and the process of healing the wound in the soft tissues and bones are discussed. Different clinical studies have evaluated the result of the several conventional periodontal surgical therapies. The first section inside the mouth is known as mouth cavity or oral cavity. The review includes the different discussion related to the factors that includes the healing process of the cavity after the process of surgery. There are different processes that need to be kept in notice after the surgery for the quick and proper recovery of the patient.

Introduction

The main aim of the discussed topic in the particular a review in to provide proper knowledge related to the recovery of the patient after the oral cavity surgical process. The assignment also includes different factors that come as an obstacle in the process of treatment and thus effect the healing of the wound (Bolsinger, et al. [1]). In the below discussed review proper discussion related to the quick healing process is described followed by the factors that are responsible for developing restriction in the quick healing process of the wound after the process of oral surgery. Due to such factors the surgeon as well as the patients may suffer pre and post period of the surgery. The review is then followed by a conclusion that describes the detail study that has been described in the section (Fayoumi et al. [2]). The goal of the study is to find the process of treatment that reduces bleeding and results in the effective bone and soft tissues healing after the process of surgery.

Discussion

Healing process

The research for the dental surgery or oral surgery results in the involvement of different materials and the procedures that are useful in improving the condition of clinical treatment and for better outcome of the surgeries. There are different processes for the healing the wound that has developed due to the surgery are discussed below. It is essential to know the healing process as it becomes easy for the surgeon to provide proper treatment to the patient so that the patient can result in fast recovery (Femia, et al. [3]) (Figure 1). The tissue regeneration is the process is done through the new approach of platelet rich plasma that provides a positive response in different healing process related to the oral or dental surgery. The process is generally effective in the aging people. The platelet rich plasma is obtained from the centrifugation of the patients self-blood and the blood contains the growth factor that helps in healing the wound. Thus, the process plays an important role for the repair mechanism of the tissue. Different experts has concluded with the statement that use of PRP during the process of surgery helps in healing the wound of the patient and thus the patient can recover fast. The activity that PRP plays during the process of surgery is that it reduces the amount of bleeding and enhances the soft tissues to heal and the bone to regenerate (Fitzpatrick et al. [4]). Different research has conducted on human relating to the treatment of PRP to check the effectiveness on the patient after the surgery. The process has been used in different process of treatment that includes surgery for tooth extraction, implant surgery and periodontal surgery. The healing of the wound done through the process of PRP is followed by the use of bisphosphonate (Gulliksson, [5]). PRP is generally used in a form of gel that is developed by mixing calcium chloride and thrombin. Aging patient is mostly recommended with the healing process of PRP as the patient is in the special need for the treatment. Moreover, the aging people are considered to be subjected in the systematic disease that response the treatment related to surgical treatment in case of tissue repair and coagulation (Figure 2).

OPEN ACCESS

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Received Date: 19 Dec 2017

Accepted Date: 14 Jan 2018

Published Date: 18 Jan 2018

Citation:

Alani AF, Al-Delayme RM. Critically Discuss and Analyze the Factors that can Affect Bone and Soft Tissues Wound Healing. *J Dent Oral Biol.* 2018; 3(1): 1123.

ISSN: 2475-5680

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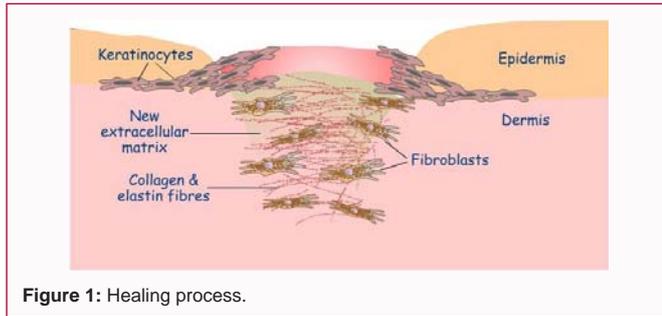


Figure 1: Healing process.

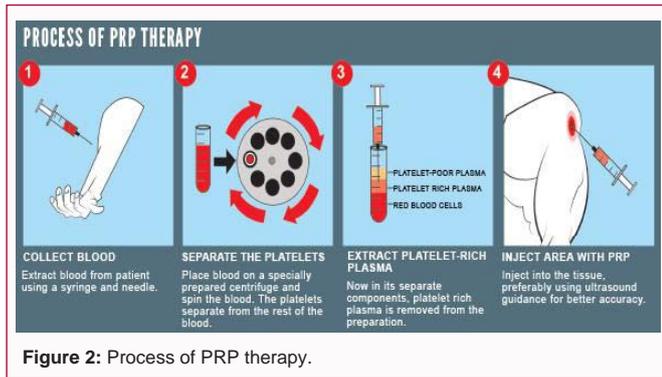


Figure 2: Process of PRP therapy.

The soft tissue and bone results in the inflammation that also shows the symptoms for swelling, pain, increased local temperature and sometime redness. The structures are generally rebuilt and reformed but the phase takes some time for the completion of the stage. The capillary brings nutrition to the particular area and results in the collagen cross link. The phase begins with the decrease in the area of the wound that shows that the wound started to heal. At the next phase the wound started to heal resulting in the recovery of the patient. The healing for any sort of wound requires time and if the patient is an elderly patient then the consumption of time is more. Thus, PRP is the most effective and widely used process in present scenario (Jakubovics and Palmer, [6]).

Analysis of the treatment through the PRP

The research conducted according to Dickersin’s search strategy, it was concluded that PRP is used in wide range in the present situation by the entire surgeon. The research that was concluded to find the effective result of PRP includes different section. In the first section helps in understanding the study related to the mechanism of action of PRP. The second step helps in discussing the use of the PRP in the surgery procedure especially in the dental surgery. And the third section includes the study related to the use of PRP gel in preventing and developing the soft tissue and bone. The PRP can be defined as the concentrated autologous platelets in lesser volume of autologous plasma. The concentrated platelets are known as Platelet Rich Plasma that is developed by centrifuging the blood collected from the patient itself. The proper development of the gel is studied by the researcher in order to find the appropriate outcome of the process. The normal platelet count in the human blood is 150,000/1 liter but after the process of centrifugation process is done and the Platelets Rich Plasma is developed the platelets count for the particular blood sample stands to 1,000,000/1litre in a 5 milliliter sample. Thus, the gel developed from the particular blood results in quick healing of the wound due to the excessive amount of platelets availability in the blood (Lee, [7]) (Figure 3). Different clinical practices are subjected relating to the process of treatment to make the patient fit and get recover fast.

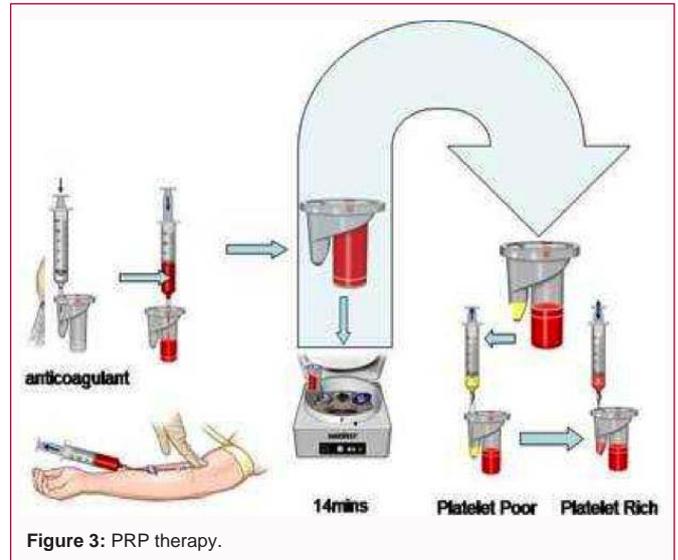


Figure 3: PRP therapy.



Figure 4: Factors affecting wound healing.

In the present era, the health expert generally select for the Platelets Rich Plasma as the procedure for the particular treatment is easy to proceed and the patient can get easily recovered by its practices. There are also different processes that can heal the wound of the surgery but among the all process the preference is provided to the PRP treatment as the working process is better known by the experts and also is less expensive (Mehrotra, [8]).

Factors affecting the surgical process to heal the wound fast

During the process of surgery of the oral cavity the various issues and factors affects the healing of the wound. The factors are as follows

Local factors that result in infection

The normal factor that may affect the healing of the wound may be the factor related to the infection. The infection in the wound area may result due to different reason. The main reason may relate to the hygiene environment where the patient is proceeding with the process of surgery. There are different microorganism that are present in the clinics or the health care Centre that may result in causing different infection if preferable environment is developed (Mingviriyi, [9]).

Procedures related to the surgery

The healing of the wound may get affected if there is any limitation or negligence done by the professionals or the nurses during the surgery procedure. The condition of the patient needs to be checked and if the condition is preferable then the surgeon need to continue with the surgical process for the better outcome. All the instruments

and equipment used in the surgery need to be properly sterilized then it may result in different types of infection in the area where the surgery is conducted (Figure 4).

Systematic factors

There are different systematic factors that affect the healing of the wound caused after the surgical procedure. The factors are illustrated below.

Disease: The patient suffering from the different disease or having any issue related to the healing of the wound may affect the patient to recover fast. The procedure of the surgery in some cases gets affected if the patients have different health related issues (Yarbro, et al. [10]).

Age: In some of the case the healing of the patients results depending on the age of the patients. The elderly patient takes time to heal the wound and recover fast as compare to the adult or child. The children requires less time to overcome the situation as the development of the tissue is fast and can provide better nutrition to heal the area (Shah, et al. [11]).

Hormonal change: The healing of the wound also gets affected if the person is passing through the phase where most of the hormonal changes take place. Due to the rise and fall of different hormone in the body the healing of the wound may take time in the patient.

Cancer: The wound of the surgery takes time to get heal if the patient is suffering from oral cancer. The surgery procedure is conducted by cutting down the muscle where the cancer cell has grown. Thus, it takes time for the wound to get healed (Sindwani, [12]).

Smoking and consumption of alcohol

The other factor that affects the healing of the wound after the surgery is due to the habit of smoking and consumption of alcohol (Preedy, [13]). The tobacco consumption and intake of alcohol may result in different disability in the patient and thus the patient takes time to recover. Therefore, the patient going through any kind of surgery need to cut down the habit of smoking and consuming alcohol (Garg, [14]).

Medication that includes chemotherapy

There are different medicines that affect the healing process and affect the recovery from the wound in the patient. The main medication that affects the treatment is the medication of chemotherapy. The patient those are provided with chemotherapy treatment takes time in getting heal from the wound as the patient cannot be administered with the medicines to heal the wound.

Nutrition and obesity

The other factors that affect the healing are proper nutrition and obesity. Any patient fails to provide with proper supplement of the nutrition, fails to develop the require components that are required for the recovering the wound (Gottlander and Steenberghe, [15]). Moreover, the patient having the issue related to the obesity fails to heal the wound as due to the excessive fat in the body the patients fails to develop the tissue and reform the tissue. The patient suffering from obesity also has different health related issues like heart disease, diabetes or hypertension. In case the patient is diabetic then the healing of wound takes long time and some physician does not suggest to go through the procedure of surgical treatment (Yilmaz et al. [16]).

Conclusion

In the above studied assignment, the researcher had described the different factors that affect the healing of the wound in the patient goes through the oral cavity surgery. The process through which the soft tissues and bones can be healed after the process of treatment is also discussed in the provided section. There are different processes that help in healing the wound after the process of surgery. The main technique that is implemented in the following study is related to the treatment through Platelet Rich Plasma. The process is a innovative technique and is used mostly in the aging people as the people takes lots of time to get healed from any wound. The different factors that affect the particular situation are also discussed in the particular section and the reasons for the factors to get effective are also explained by the researcher. The proper care and the attention of the experts and the nursing care are also required for the welfare and fast recovery of the patient. Passing through all the factors, the patients going under certain surgery need to be provided with better care and hygiene environment that will result in the fastest recovery of the patient.

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