



## Protein Rich Fibrin; A Miracle in Oral Surgery Patients Undergoing Third Molar Surgery

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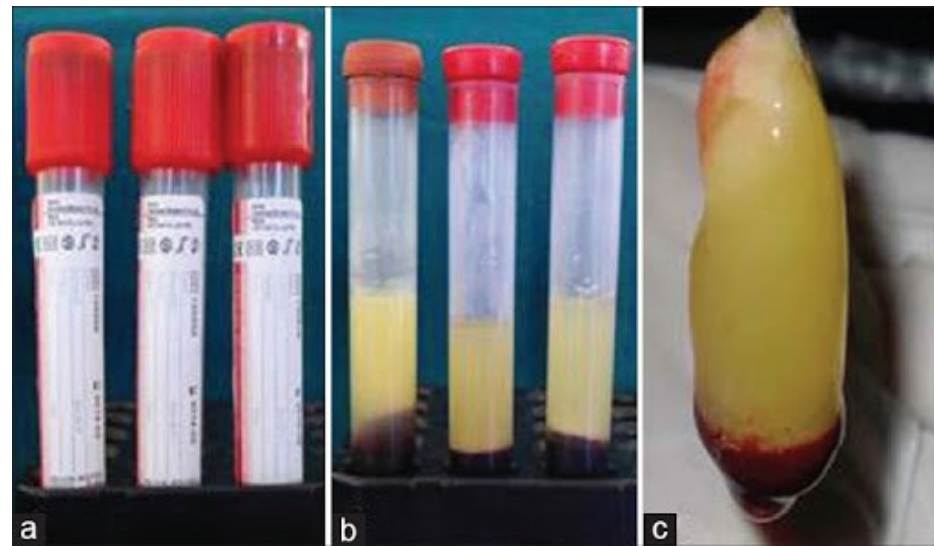
### Editorial

Pain is such thing that causes person feel alone, empty and disheartened. Patients visiting to us complain of severe pain in dental department. Among many pains, pain caused by third molars is more sever and massive resulting into fever, pain halitosis, swelling. These all are present in the third molars which fail to erupt in there functional position in oral cavity knows as impacted third molars. Many patients are afraid and anxious to go for extraction. So, they keep on taking antibiotics and analgesics. So, when they come to visit hospitals or clinics it's at last episode when there is severe pain. Here the surgeons decide to go for surgical extractions of third molars after consent with their patients.

There are different techniques to go for surgical extractions by giving incisions, sectioning tooth, bone guttering by using surgical burrs. The main aim of surgeon is to minimize pain during and after extractions. The surgery is confronted to a diversification of interventions that leads to new requirements both for the surging going patients and form performing surgeons as well. So, we are always looking for improvements in operative procedures and to decrease the healing time using suitable and biocompatible medications and instruments. In fact, the mechanisms that control the healing are complicated and some aspects remain unknown [1]. to relief pain and reduce swelling we are using PRF in the extracted socket which is like a miracle for the patients. After using that there was tremendous change in the healing pattern of wound. Patients complain of less pain, less swelling, less bleeding and more comfortable. This was

possible due to a well understanding of the growth factors role helped to elaborate new bioactive materials capable of guiding and promoting the healing [2]. Platelet-rich fibrin (PRF) described by Choukroun et al. [1] is a second-generation platelet concentrate which contains platelets and growth factors in the form of fibrin membranes prepared from the patient's own blood free of any anticoagulant or other artificial biochemical *modifications* [1-4].

PRF prolongs the effects of typical physiologic wound healing. This provides a condensed network of fibrin that is saturated with cytokines, growth factors during 1 to 4. PRF speeds up the healing process and also optimizes bone grafting results [5,6]. It is capable of generating both soft tissue and bone and can be used in conjunction with either a bone substitute or alone [7-10]. The PRF procedure is a simple one beginning with drawing a patient's blood and placing it in a centrifuge for 10 minutes without the addition of an anticoagulant. During the centrifuge process, the blood coagulates and separates into three distinct layers. The bottom layer is a red blood cell (RBC) layer that is removed and discarded while the top layer encompasses a cell free layer that is also unused. The middle layer is a mesh network which contains the majority of the platelets and fibrin (Figures a, b and c) [1]. Once seperated from the clot, the PRF may be withdrawn. This layer can be compressed into a membrane or shaped into a plug depending on what treatment is needed [1]. This layer can be even mixed with bone grafts and can be filled in the extracted sockets.



Figures: a, b and c

This has been proved a miracle in our one hundred and fifty patients where we did free PRF extraction from their own blood and mixed with bone graft and placed in their sockets. PRF membranes are frequently used in combination with bone graft materials to reduce healing times and promote bone regeneration. In our cases we used PRF in combination with bone graft which proved to be boon for the patients. These findings were confirmed and more efficient methods to alleviate the postoperative complications of this procedure using PRF evolved.

PRF has been successfully used in the treatments of Intrabony periodontal defects, mandibular Grade II furcation defect and gingival recession defect, in the treatment of medication-related osteonecrosis of the jaw with good healing results.

Greater attachment levels and bone-fill were notable findings. Similar improvements in patient outcomes were observed for mandibular Grade II furcation defect and gingival recession defect. Its ability to relieve pain and post-operative swelling during tooth extractions and in the treatment of tooth lesions, are also widely documented. PRF was also used in the treatment of medication-related osteonecrosis of the jaw, with promising results for the healing and quality of life improvement of patients.

## Conclusion

Use of PRF is quite simple and easy which is more affordable and cheaper to the patients. Its healing capacity is wonderful. In our study it proved to be miracle to the patients and needed further study with many cases. Its use in oral surgery will certainly prove BOON FOR THE PATIENTS.

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