



\*PHO University Dental Clinical Centre  
"Sveti Pantelejmon"  
Department for Oral Surgery and Implantology  
Faculty of Dentistry  
University "Sts Cyril and Methodius"



\*\*Faculty of Medical Science –  
Dental medicine  
Department of Oral and Maxillofacial  
Surgery and Implantology  
University "Goce Delcev", Stip



## **SECOND GENERATION PLATELET CONCENTRATE (PLATELET-RICH FIBRIN) AND IT'S APPLICATION IN ORAL SURGERY**

Biljana Evrosimovska\*, Daniela Veleska-Stevkovska\*, Cena Dimova\*\*, Zaklina Menceva\*

The development of bioactive surgical additives, which are being used to regulate the inflammation and increase the speed of healing process, is one of the great challenges in oral surgery.

PRF is a biomaterial, in which, platelets and leukocytes are collected with high efficiency such that the growth factors will be able to release gradually during at least 1 week.

The aim of the study was to summarize our clinical cases regarding the technique of using PRF, focusing on its preparation, advantages of using it in oral surgery.



Acellular Plasma Layer  
Platelet Rich Fibrin Layer  
Red Blood Cell Layer



Lab centrifuge

### **PRF PROTOCOL**

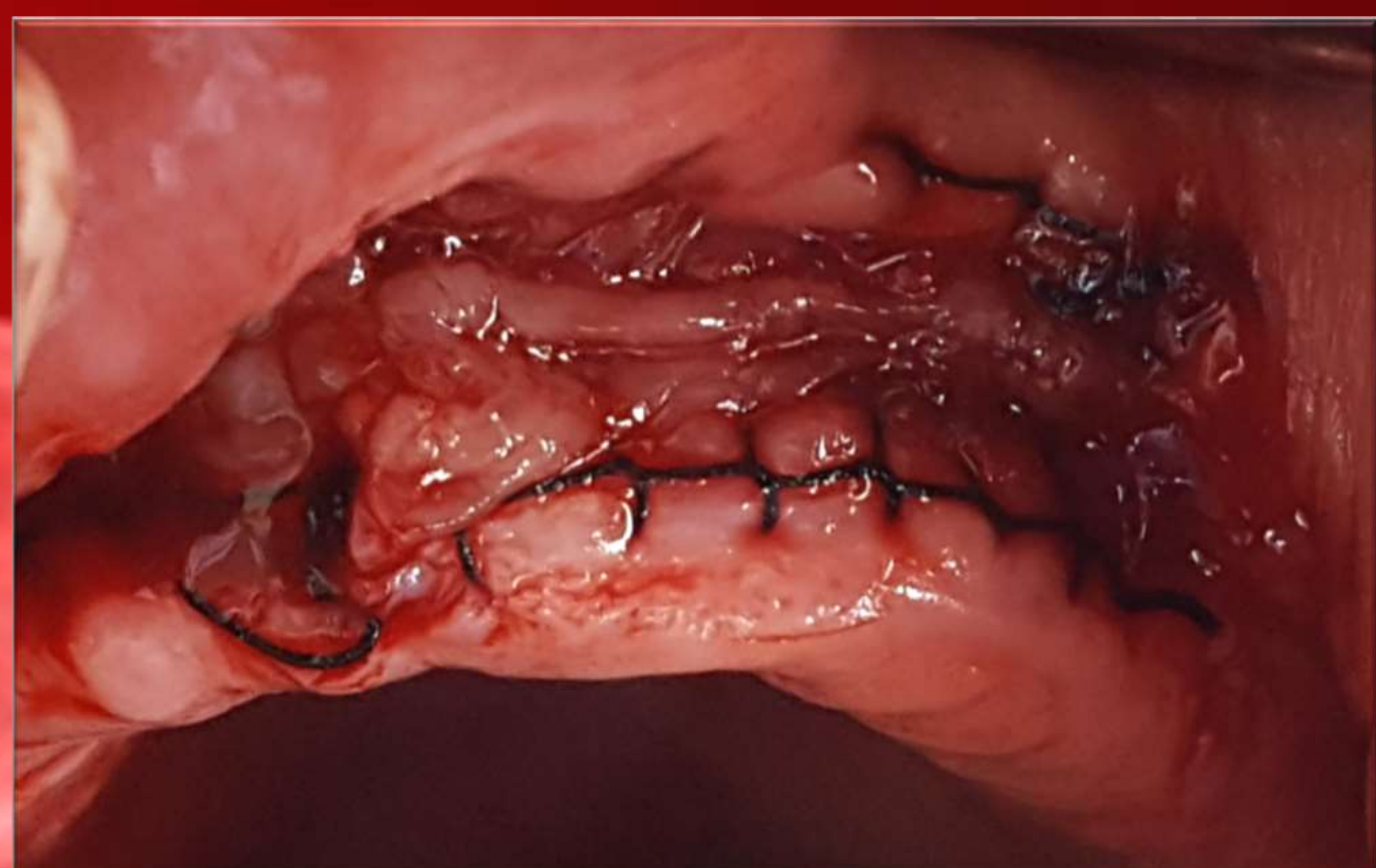


PRF clot



Preparing PRF membrane in PRF Box

### **PRF as a membrane**



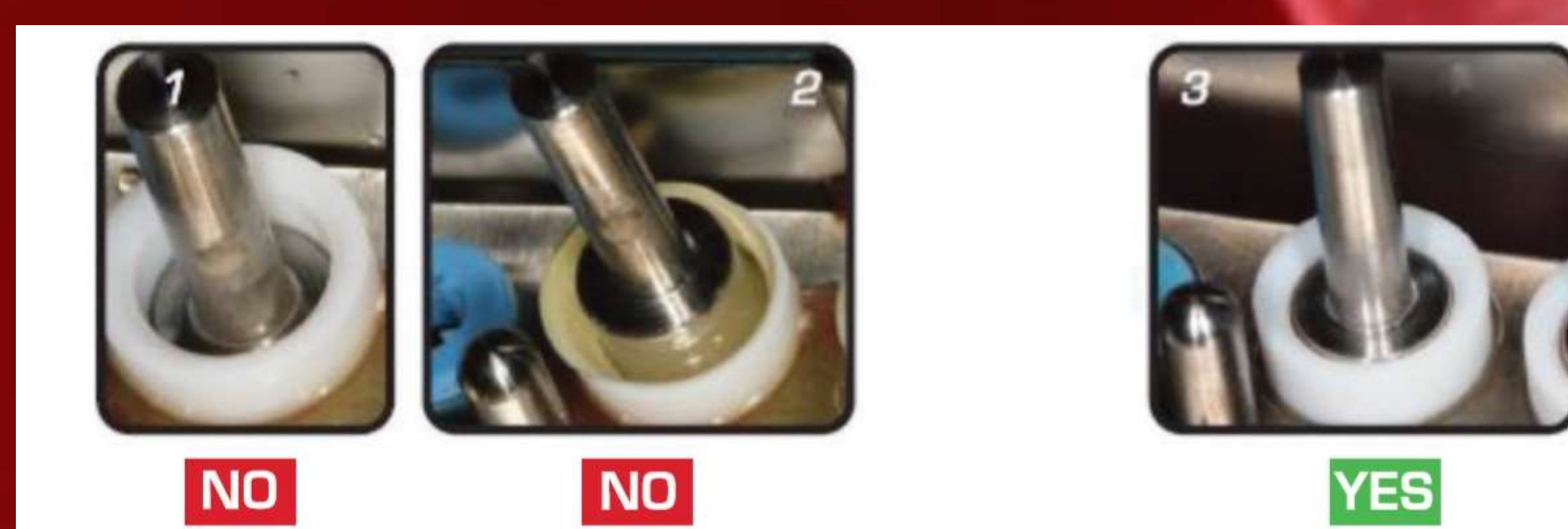
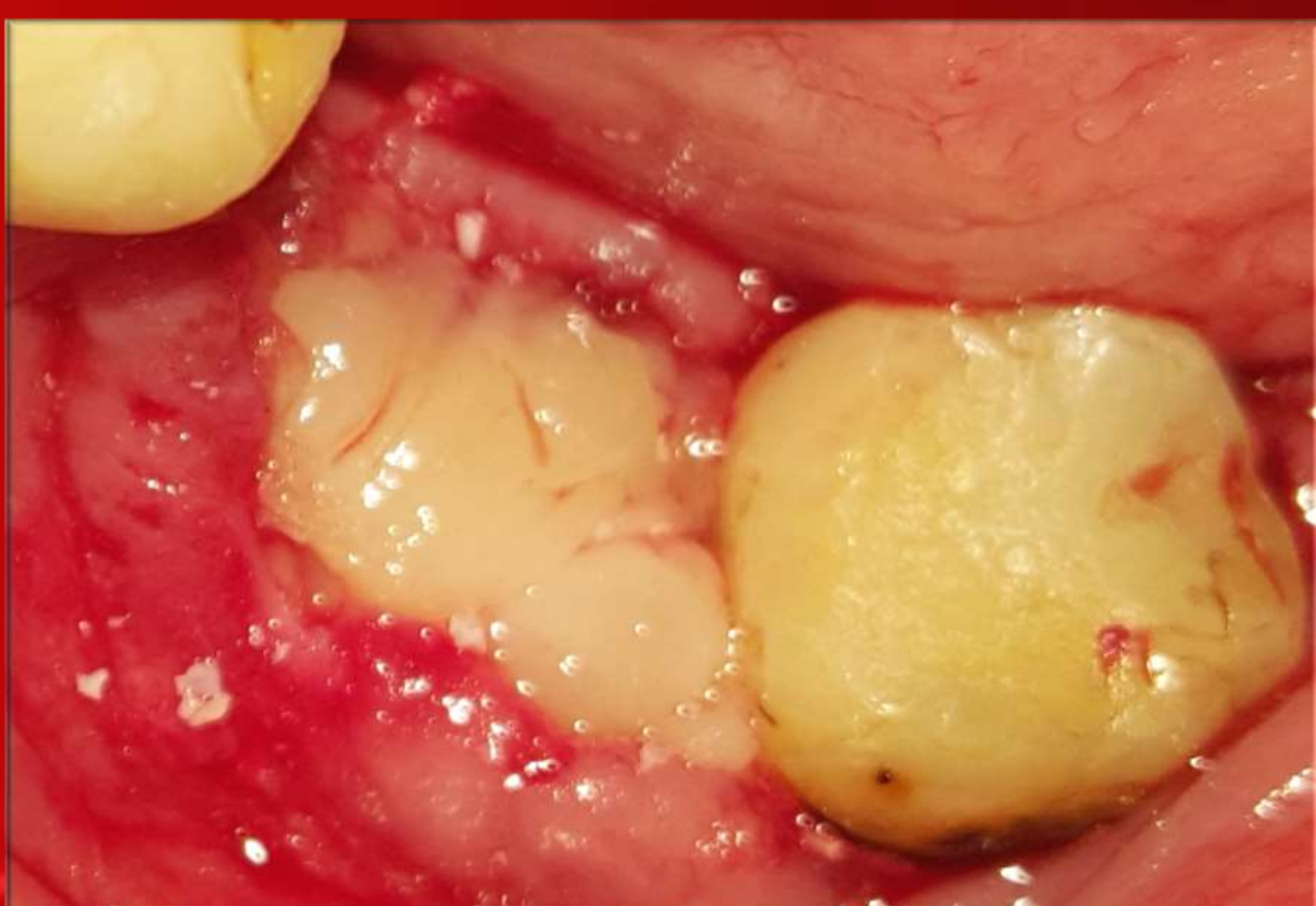
in preprosthetic surgery



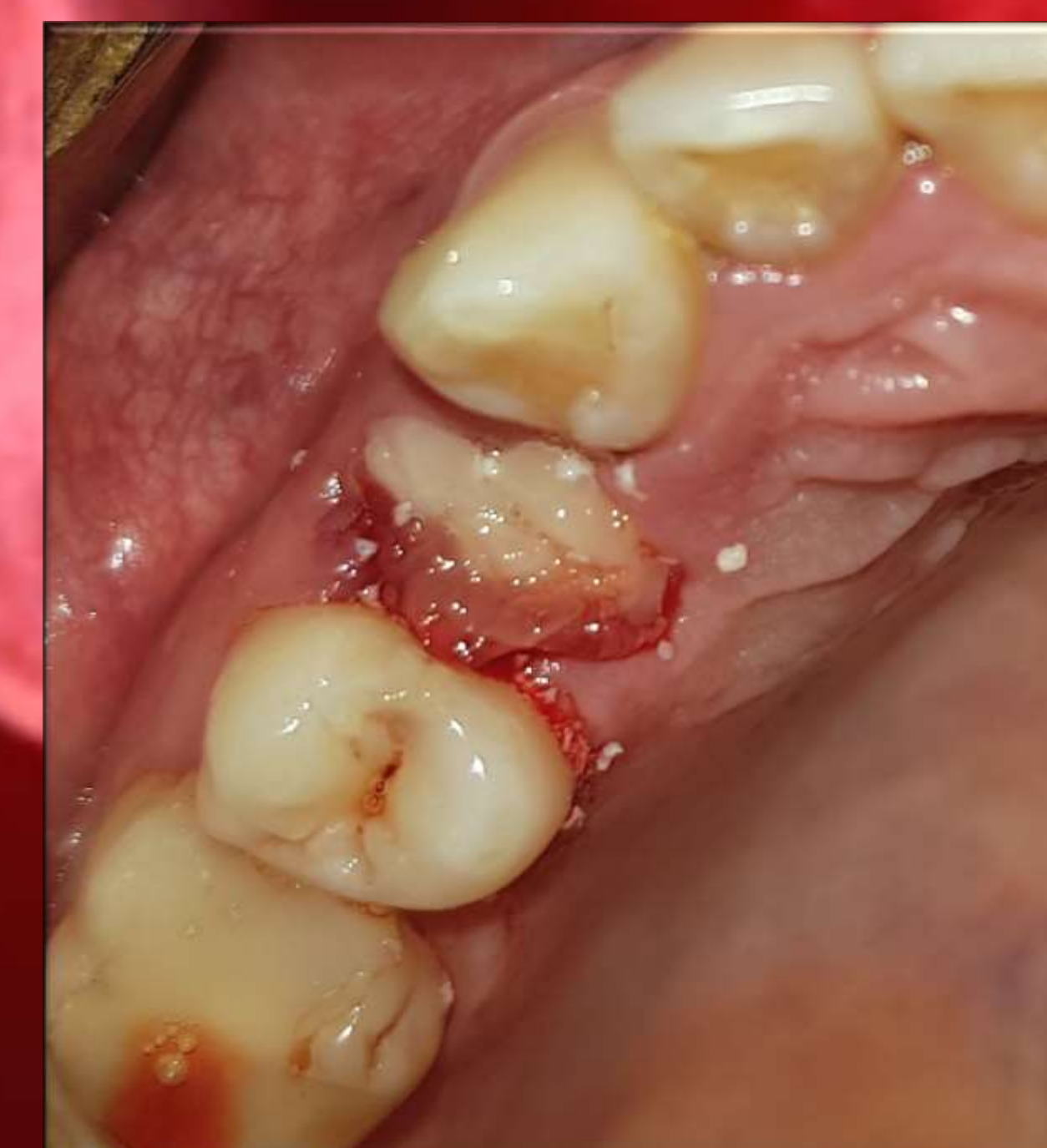
donor side



covering the sticky bone



In the extraction sites, it is preferable to use the PRF plugs prepared in the PRF BoX.



The soft and bone tissue management in all our cases show process of neovascularization through the PRF clot and the epithelial covering development. In spite of the infectious and inflammatory statement of such sockets, rapid healing of the wound is observed without pain, dryness, or purulent complications.

PRF alone or in combination with other biomaterials seems to have several advantages and indications in oral surgery, due it is a minimally invasive technique with low risks and satisfactory results.