

REGRAS DE SUBMISSÃO - PROFISSIONAIS DE SAÚDE PARA TRABALHOS
CIRÚRGICOS / HEALTH PROFESSIONALS FOR SURGICAL WORK

**ONCOLOGICAL PATIENT WITH EXPOSED BONE AFTER ORAL CANCER
RESECTION TREATED WITH PLATELET-RICH FIBRIN (PRF) AND
PHOTOBIMODULATION: CASE REPORT**

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Objective: Oral cancer is surgically treated and complemented with chemotherapy (CT) and/or radiotherapy (RT). The dentist must evaluate this patient prior to RT, propose and perform dental treatment (extractions, periodontal scaling, among others) to minimize the risk of future osteoradionecrosis. Generally, the professional has little time to perform it, once RT needs to be started as soon as possible after its indication.

This case report describes the treatment of a patient who has a bone exposure area after tumor removal surgery, in dental evaluation prior to RT. The medical team would treat the exposed area by recovering the adjacent area with flap rotation surgery in a surgical room. The dental team suggested ambulatory treatment by covering the exposed area with PRF and photobiomodulation. The platelet-rich fibrin (PRF) regenerative and healing properties, which accelerates the process due to the large amount of growth factors, leukocytes and undifferentiated mesenchymal cells. PRF is a technique already used in dentistry, mainly in implantology and periodontics. In medicine, for wound

treatments. Photobiomodulation has benefits in controlling inflammation, pain, among others. The combined use of these two techniques seems to accelerate the repair process and avoid delays in RT

Methods: Patient underwent ambulatory surgical procedure by the dental team of the Head and Neck Surgery Department of the Educational Institution. After local anesthesia, the exposed bone was removed/remodeled by using surgical drills and manual curettage. PRF was obtained by centrifuging the patient's blood, according to the protocol described by Choukroun, (800 rpm/8 minutes/RCF=435g). The centrifuged material is composed of three parts: red blood cells and fibrin (solid) and plasma (liquid). Using the fibrin portion, we made membranes measuring approximately 1.0cm x 2.5cm x 0.2cm, using an appropriate device. The membranes were sutured over the surgical wound, completely covering the exposed bone. Postoperative monitoring was performed at 3, 7, 15 and 22 days, with application of low-level laser (2J red) to aid tissue repair.

Results: The patient presented progressive epithelialization of the treated area with total coverage of the exposed area. There were no complications during clinical follow-up and RT was initiated.

Conclusion: PRF is low cost, easy to perform and can be a supporting resource in solving problems in patients with bone exposure after oncological surgeries. Its use associated with Photobiomodulation improved the tissue repair process.

Palavras-chave: bucal cancer; platelet-rich fibrin; surgery; dental treatment; photobiomodulation.