Review of: "Bisphosphonate-Related Osteonecrosis of the Jaws Treated with Platelet-Rich Plasma: Preliminary Results from a Case Series"

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Potential competing interests: No potential competing interests to declare.

Bisphosphonate-Related Osteonecrosis of the Jaws Treated with Platelet-Rich Plasma: Preliminary Results from a Case Series – Article Review

In this study, the success of a new platelet-rich plasma preparation (B.P.F.C. Bio-Plasma® Rich in Pure Growth Factors®, for obtaining Biologically Guided Regeneration) used in the treatment of jaw osteonecrosis (BRONJ) caused by bisphosphonate use is evaluated. This preparation differs from the original preparation procedure described by Eduardo Anitua in that it does not use sodium citrate and calcium chloride as anticoagulant and activator. This difference seems important for the uniqueness of the study; because when the literature is examined, it is shown that both human and rat studies have been previously conducted for the treatment of BRONJ with PRP. +

The study discusses the inhibition of osteoclast activity and the impact on normal bone turnover by bisphosphonates. It is mentioned that the etiopathology of bisphosphonates in relation to osteonecrosis of the jaw is not sufficiently understood. However, it is known that bisphosphonates, which have higher bone penetration compared to other tissues, accumulate more in bones with higher turnover. In this case, the turnover capacity of jaw bones and oral mucosa can be explained by effect of masticatory system, continuous remodeling around the periodontal ligament with the chewing pressure, easily microfracture occur during function. The thin oral epithelium, which can be easily traumatized, can also be effective in BRONJ. The higher incidence of BRONJ of mandible can also be explained by the involvement of the temporomandibular joint and the mandibular canal, which provide greater turnover capacity.

In the study, in order to ensure closure after the surgical procedure, platelet-rich plasma was used first, then platelet-poor plasma was used. The effect of platelet-poor plasma on the study is not fully understood.

The primary success of the study has been mentioned to be the maintenance and continuity of mucosal integrity. This raises the question: Would other mucosal closure methods (membrane, tissue graft, tissue mobilization with suturing...) provide the same success instead of this preparation prepared with a different procedure?

The sharing of information about the rpm and minute details related to the centrifuge in the materials and methods section of the study is a suggestion regarding the study.

It is not known why patients using bisphosphonates in the study. It is also unknown whether the systemic illness of the

patient and this systemic difference between the patients will affect the success of the study.