

Effect of Platelet Rich Plasma on Healing of Distracted Mandibular Segment

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Objective: Recent efforts to improve wound healing have focused on autogenous sources of bioactive mediators, such as platelet rich plasma (PRP), which offers the potential to enhance bone healing, the aim of this work was to study the effect of platelet rich plasma on distraction osteogenesis.

Patients & Methods: Ten patients (7 females and 3 males), their ages ranged from 7 years to 23 years (mean of 14.45 years) were presented with bilateral mandibular hypoplasia. All patients were treated with bilateral mandibular distraction osteogenesis, using both intra& extra-oral unidirectional distractors. Platelet rich plasma was applied only at left site while the right site was considered as a control. The follow-up periods were 3, 6 months & one year using panoramic X- ray which was analyzed by special soft wares to determine amounts of formed bone and its gray level. Axial computerized tomography was used to measure bone density in House field units.

Results: gray level at right site was $101/256 \pm 6.50$ while that of left site was 108.7 ± 7.30 with no significant difference ($P > 0.05$); Amount of formed bone at right site was $294185 \text{ pexils} \pm 1.018$, while that of left site was $366921.5 \text{ pexils} \pm 1.70$ with no significant difference ($P > 0.05$) between right and left sites. The CT density at right site was $537.9 \text{ HU} \pm 35.32$ and that of left site was $501 \text{ HU} \pm 53.37$ with no significant difference ($P > .05$).

Conclusion: Platelet rich plasma has no significant role in distraction osteogenesis as regard amount of formed bone and its density.

Biography:

Professor Amr Ali El-Swify completed oral & maxillofacial surgery in Suez Canal University and he graduated at Cairo University where he got his PhD. He became the chair of the department of oral & maxillofacial surgery at faculty of dentistry in Suez Canal University from 2004 till 2009 then the chair of oral & maxillofacial department at Sinai University from 2010 to 2015. In 2015, he visited Taif University, KSA as a visitor-professor till 2017. He supervised 14 Master & doctorate thesis's in addition to, participating in 29 Master & PhD thesis's as a member of the referee committee.