

# INHIBITION OF ALVEOLAR OSTEITIS IN MANDIBULAR TOOTH EXTRACTION SITES USING PLATELET-RICH PLASMA

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Alveolar osteitis (AO), also known as dry socket, continues to be a complication of tooth removal. Platelet-rich plasma (PRP) can be used to accelerate both soft and hard tissue healing. This paper is a retrospective review of the benefits of PRP in AO prevention. PRP was obtained from patients for use in the postremoval alveolar sockets of mandibular molar extraction sites. Statistical analysis of 904 extraction sites with and without PRP use was examined. PRP significantly reduced the incidence of AO by 62.1%, from 9.57% in patients not receiving PRP to 3.63% in patients who received PRP ( $P = .00043$ ). PRP use had benefits in all subpopulations. The odds of AO occurring in patients not receiving PRP treatment following tooth extraction was 2.81 times greater than in patients receiving PRP treatment immediately following tooth extraction. Four statistically significant risk factors for AO were identified: complete impaction, oral contraceptive use, bruxism, and failure to administer PRP. The application of PRP can significantly reduce the incidence of AO even in patients with risk factors for AO, such as removal of impacted teeth, bruxism, and oral contraceptive use. PRP may be of benefit because it helps initiate clot formation, provides growth factors to facilitate the healing process, and contains concentrated white blood cells to inhibit infection. The use of PRP following tooth extraction is a simple, cost-effective technique that can be used to decrease the incidence of AO and therefore decrease postoperative pain.

**Key Words:** platelet-rich plasma, PRP, alveolar osteitis, AO, dry socket