

## Clindamycin in Dental Infections

**BOTTOM LINE:** Clindamycin is a second-line agent in the treatment of dental infections. Use of clindamycin should only be considered in truly penicillin-allergic patients; IV clindamycin should only be used in penicillin-allergic patients unable to take oral clindamycin.

**Background:** Dental infections are a common cause of emergency room visits and should be managed by obtaining source control of the infection (surgical drainage, debridement, tooth extraction, etc.) and by using antibiotics if necessary.<sup>1,2</sup> Dental infections are generally caused by oral flora and usually are polymicrobial with mixed aerobic and anaerobic bacteria present.<sup>2</sup>

### Clindamycin Characteristics:

Clindamycin has gram-positive aerobic and anaerobic bacterial coverage, excellent oral absorption (90% bioavailability) and it reaches high tissue and bone levels with oral and IV dosing.<sup>3</sup>

**There is no benefit in using IV clindamycin unless a patient is unable to take medications orally.**

**Safety:** Clindamycin is generally well tolerated and rarely causes hypersensitivity reactions or anaphylaxis.<sup>3</sup> **It is associated with a higher risk of adverse effects, including *Clostridium difficile* infection (CDI) and pseudomembranous colitis.** A meta-analysis comparing CDI risk of antibiotics compared to no antibiotics shows an increased risk of CDI with clindamycin (OR=16.8; 95% CI 7.48 to 37.76) compared to penicillins (OR=2.71; 95% CI, 1.75 to 4.21).<sup>4</sup> The incidence of pseudomembranous colitis following clindamycin use is 0.01% to 10%.<sup>5</sup> Colitis has been reported at a rate of 6.7 cases per 100 000 antibiotic exposures.<sup>3</sup>

**Efficacy:** There is equal efficacy between penicillin VK and clindamycin in odontogenic infections.<sup>2</sup> Clindamycin can be an effective agent in the case of treatment failure with other agents.<sup>2</sup> In randomized-controlled trials, oral clindamycin 150 mg 4 times daily for 5-7 days in dental infections has high success rates.<sup>3</sup>

### Appropriate Therapy for Most Dental Infections:

**Intravenous therapy is rarely necessary.**

**First-line therapy (adults):** penicillin VK 300-600 mg po 4 times daily for 7 days, with metronidazole 500 mg po twice daily if abscess is present or anaerobes suspected.<sup>1</sup>

**Penicillin-allergic patients (adults):** Clindamycin 150-300 mg po 4 times daily for 7 days.<sup>1</sup>

### References

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Prepared by: Jacey Jones, BSP, Pharmacy Resident Central Zone; [jacey.jones@ahs.ca](mailto:jacey.jones@ahs.ca)

Reviewed by: Dr. Lynora M. Saxinger, MD, FRCPC, CTropMed, Associate Professor, Division of Infectious Diseases