
Treatment of Facial Cellulitis of Odontogenic Origin: Clindamycin versus Unasyn. DEMETRIS E. RUSH, DDS*, JIAN-FU ZHU, DDS, MSD, DSc, BASIM ASMAR, MD, NAHED ABDEL-HAQ, MD, MONICA MALIAN, RPH. Children's Hospital of Michigan, Detroit, MI.

Purpose. The purpose of this study is to compare clindamycin and Unasyn (ampicillin/sulbactam) in the treatment of facial cellulitis of odontogenic origin in pediatric patients.

Methods. During one year period, 60 children, aged 2 to 14 years, with acute facial cellulitis of odontogenic origin were randomly assigned (1:1) to treatment with either intravenous clindamycin 40 mg/kg/day divided in 3 doses (group 1) or Unasyn 200mg/kg/day divided in 4 doses (group 2). All patients also underwent extraction of affected tooth/teeth or had root canal procedure within the first 24 hours. Intravenous treatment was given for 48 hours then followed by oral Augmentin (amoxicillin/clavulanate) in the Unasyn group, or oral clindamycin in the clindamycin group for a total of 7 days. 31 patients were assigned to group 1, and 29 patients to group 2. All patients had baseline recording of their temperature, respiratory rate, pulse, size of swelling, lymph node involvement, and level of pain. These parameters were measured at follow-up exams at 24 hours, 48 hours, 72 hours, and 7 days. White blood cell count (WBC), erythrocyte sedimentation rate (ESR), and blood culture were obtained from each patient before starting treatment. Culture of pus at infection site (tooth socket) was obtained from every patient at the time of surgery.

Results. Clinical and demographic parameters were similar in both treatment groups. All patients had elevated ESR and 19 had high WBC ($>15,000/\text{mm}^3$). 56 patients underwent tooth extraction and 4 had root canal procedure. Tooth socket cultures from the 60 patients yielded a total of 154 bacterial isolates (2.6 isolates/patient) and included viridans streptococcus (58), *Bacteroides sp* (47), *Eikenella sp.* (20), *Neisseria sp* (18), and *Corynebacterium* (11). Three patients (1 in the clindamycin group, 2 in the Unasyn group) had bacteremia involving 2 or 3 organisms each. Both antibiotic regimens were equally effective in treating the facial cellulitis, with no failures in either group. Rates of reduction of facial swelling, pain, and fever at 24- and 48-hour intervals were comparable in both groups. No antibiotic-associated adverse effects were noted in either treatment group.

Conclusions. Both clindamycin and Unasyn, in combination with surgical intervention, are equally effective in the treatment of facial cellulitis of odontogenic origin. Because clindamycin is less expensive than both Unasyn and Augmentin, it is therefore a more cost-effective agent.