

# **Osteomyelitis Affecting the Mandibular Condyle Following Dental Extractions**

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**Objectives:** Osteomyelitis is a bacterial bone infection traveling through the bloodstream or by spreading from a tissue nearby. While osteomyelitis is not uncommon, osteomyelitis that spreads to the mandibular condyle following a dental extraction is rare. We explored osteomyelitis of the condyle by comparing literature with our current cases that occurred through the UTHealth Houston system under the care of Dr. Craig Pearl.

**Experimental Methods:** PubMed and TMC Library databases were the main sources to find similar cases to the three case studies found in our clinic. With keywords such as “extraction AND mandibular condyle osteomyelitis,” “Osteomyelitis AND mandibular condyle,” and “Osteomyelitis and TMJ,” 3,657 articles were found and only 46 articles have relevance to our study. Through two rounds of mesh analysis, four articles remained because of exemptions such as cancerous patients, SAPHO conditions, fractures, septic arthritis, etc. Common to all cases in the remaining articles was a history of previous dental extractions on non-vital teeth or impacted molars.

**Results:** Consistent with our findings, the literature review did not demonstrate any chronic medical problems or comorbidities, however, it was noted that both the reported cases in the literature and the cases seen in our department all had spread of infection from the mandibular angle.

**Conclusions:** We believe this finding is significant enough to warrant additional studies, as we are aware that the spread of infection in bone is promoted by the increase in intraosseous pressure with resultant venous congestion and vascular insufficiency. Therefore, those patients with pre-existing dense sclerotic bone would be more susceptible to the vascular compromise. Whether this can be used as a predictor for osteomyelitis of the condyle needs to be further studied.

*This study was supported by the UTSD Student Research Program.*