

Images in Infectious Diseases

Osteomyelitis of the mandible after insect bite in a pediatric patient

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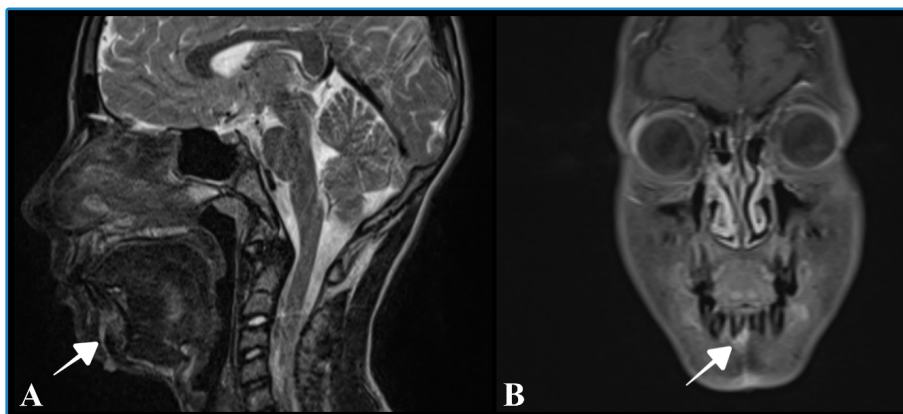


FIGURE 1: **A:** Sagittal T2-weighted magnetic resonance (MR) images showing a sinus tract (arrow) crossing the mandible and opening into the skin, a manifestation of osteomyelitis. **B:** Coronal fat-suppressed contrast-enhanced T1-weighted MR images showing enhancement in the mandibular corpus at the alveolar level.

A 13-year-old boy was admitted to our hospital with a complaint of jaw swelling. He reported being bitten by an insect, the Dracula beetle, during hazelnut harvesting 2 months prior to admission. He had no history of atopy or previous insect bite sensitization. Despite topical treatment, the swelling increased progressively. Magnetic resonance imaging revealed a sinus tract crossing the mandible corpus and opening into the skin (**Figure 1A**). After intravenous administration of the contrast agent, enhancement of the corpus mandibula was observed at

the alveolar level (**Figure 1B**). Based on these imaging findings, mandibular osteomyelitis was suspected. Blood cultures were negative; however, the wound culture revealed methicillin-resistant *Staphylococcus aureus*.

Anoplophora chinensis, or the Dracula beetle, is an invasive insect whose larvae feed on the lower trunks and exposed roots of many tree species in forested habitats. No toxicity or irrigation effects of *Anoplophora spp.* have been reported in humans¹.

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Authors' contribution: UE: conceptualization, data curation, software, writing- original draft, writing-review, and editing, supervision, validation, visualization; IMC: validation, and writing review and editing, data curation, resources.

Conflict of Interest: The authors declare that they have no conflict of interest.

Financial Support: No funding was received for this study.

Received 13 April 2023 • **Accepted** 28 April 2023

Arthropod bites are common in pediatric patients, and most cases are benign and self-limiting. Rare cases of osteomyelitis caused by arthropod bites have been reported, with only one case of mandibular osteomyelitis reported in an adult patient^{2,3}. In such cases, the pathogenesis of osteomyelitis is attributed to bite-related traumatic injuries, which facilitate bacterial infection³. Similarly, in our patient, we believe that microtrauma and local inflammation of the skin after the beetle bite predisposed the patient to bacterial infection, leading to osteomyelitis. Clinicians should be aware of the serious complications, such as mandibular osteomyelitis, following insect bites in pediatric patients.

ACKNOWLEDGMENTS

Not applicable.

REFERENCES

1. Keena MA, Richards JY. Effects of Temperature on *Anoplophora chinensis* (Coleoptera: Cerambycidae) Larvae and Pupae. *Environ Entomol.* 2022;51(1):153-66. Available from: <https://doi.org/10.1093/ee/nvab132>
2. Raja V, Low C, Sastry A, Moriarty B. Pott's puffy tumor following an insect bite. *J Postgrad Med.* 2007;53(2):114-6. Available from: <https://doi.org/10.4103/0022-3859.32212>
3. Naidu DK, Ghurani R, Salas RE, Mannari RJ, Robson MC, Payne WG. Osteomyelitis of the mandibular symphysis caused by brown recluse spider bite. *Eplasty.* 2008;8:e45.