MANDIBULAR OSTEOMYELITIS IN CAMELIDS
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Key Points:
- Mandibular osteomyelitis in camelids presents as generalized, lytic destruction of the mandible characterized by the formation of bone sequestra from devitalized cortical bone.
- Successful treatment relies on long term antimicrobial therapy, and aggressive, but judicious removal of the sequestra over an extended time period.

Although dental disease is common in camelids, primary mandibular osteomyelitis is encountered less frequently than other dental problems. This is fortunate because the condition is characterized by extensive, generalized destruction and lysis of the mandible. Often the condition spans the entire length of the hemimandible, involving the diastema and occasionally the symphyseal region around the incisors. Primary mandibular osteomyelitis has often been referred to as lump jaw, probably because Actinomycetes spp. have been isolated in many cases. This association is likely not accurate and should be discouraged.

The purpose of this presentation is to summarize the cases of this condition seen at Oregon State Veterinary Teaching Hospital. Comparing our experiences with those of other hospitals may allow development of better methods of diagnosis and management of this challenging disease condition.

Animals affected by this condition were younger (<5 years), predominately female, and were presented because of visible and palpable mandibular swelling, with or without draining tracts. Some patients were presented for a signs of abnormal mastication, weight loss, or reduced appetite. Physical and oral examination clearly indicate the presence of a dental problem. Radiographs of the region demonstrate diffuse lysis of the mandibular cortical bone. Although multiple tooth roots may be surrounded by lytic bone, this condition is easily distinguished from the secondary focal bone destruction associated with tooth root abscessation. In chronologically advanced cases, bone sequestra with or without draining tracts will be apparent. The use of computed tomography (CT) provides a much clearer image and depth of the bone destruction and a three dimensional model of the region. Culture of the region often yields mixed aerobic and anaerobic organisms, including Actinomycetes, Bacteroides and Strep. species.

Once diagnosed, treatment for the diffuse infection involves long term antimicrobials (up to 3 months or more), oral iodides, symptomatic management, and surgical debridement. Some antimicrobial options include penicillin, isoniazid, ceftiofur, or florfenicol. In contrast to a tooth root abscess in which surgical removal of the affected tooth leads to resolution, mandibular osteomyelitis requires multiple, deliberate, efforts to remove sequestered bone as it “exfoliates” from the parent bone. This is often the challenge to the clinician because the client is often anxious to correct the problem with a single surgical procedure. Fortunately, most clients will accept the costs associated with repeat CT exams and minor surgical procedures conducted during recumbent sedation.

Although the initial radiographic or CT images demonstrate severe bone loss and apparent involvement of multiple tooth roots prompting an unfavorable prognosis, our experiences prove otherwise. The majority of cases have responded well to prolonged antimicrobial therapy and judicious surgical debridement. Although long term negative impact from extensive mandibular bone destruction has not become apparent, direct followup is the only accurate means to support this statement.