Rare Mandibular Surgical Ciliated Cysts: Report of Two New Cases

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The surgical ciliated cyst, also known as the "postoperative maxillary cyst" or "implantation cyst," occurs as a result of iatrogenic implantation of respiratory epithelium into a noncontiguous surgical site after sinus surgery. It typically presents as a well-defined radiolucency in the maxilla in young adults. Histopathologically, the cyst is lined by ciliated columnar, cuboidal, or pseudostratified squamous epithelium with mucous cells. We report two rare cases of a surgical ciliated cyst located in the mandible.
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The term "surgical ciliated cyst" is often used interchangeably with the terms "postoperative maxillary cyst" and "implantation cyst," and this condition has been well-described in Japanese published studies since the 1980s.[1,2] However, it is uncommonly reported in Western populations.[3] Typically, the surgical ciliated cyst occurs in the posterior maxilla, presenting as an expansile lesion. It is associated with a history of previous maxillary sinus surgery and is believed to arise from the iatrogenic implantation of respiratory epithelium.[2] The conventional treatment for a surgical ciliated cyst is enucleation or marsupialization, if the lesion is large. However, recurrence can occur if the cyst lining is incompletely removed.[4,5] We report two cases of surgical ciliated cyst that developed in the mandible.

Case Reports

CASE 1

A 72-year-old Caucasian male presented with a painless swelling in the anterior mandible. The panoramic radiograph revealed a 3.0-cm, well-defined radiolucency extending from the left to the right mandibular canine (Fig 1A). His medical history was significant for hypertension and hypercholesterolemia, and he was taking atorvastatin, amlodipine, and ramipril. Fifty-six years prior at the age of 16, the patient had undergone simultaneous rhinoplasty and genioplasty for cosmetic purposes.

The lesion was removed by curettage (Fig 1B). The defect was filled with bone graft with recombinant bone morphogenetic protien-2 (INFUSE Bone Graft, Medtronic Spinal and Biologics, Memphis, TN). The 1-year follow-up examination showed no pathologic features, with normal healing. Histopathologically, the cyst wall was densely fibrous with scattered lymphocytes (Fig 1C). It was generally lined by two layers of low cuboidal-to-columnar epithelium with luminal ciliated cells and foci of nonkeratinized stratified squamous epithelium; mucous cells were not present (Fig 1D). Hyalinization of the fibrous tissue was present beneath the epithelium. Based on the history, radiographic and histopathologic findings, the diagnosis was a surgical ciliated cyst. No recurrence was detected at the 14-month follow-up visit (Fig 1E).

CASE 2

A 42-year-old Caucasian male presented with a well-defined radiolucency, measuring 2.7 × 0.9 cm, in the right ascending ramus (Fig 2A). In addition, he had

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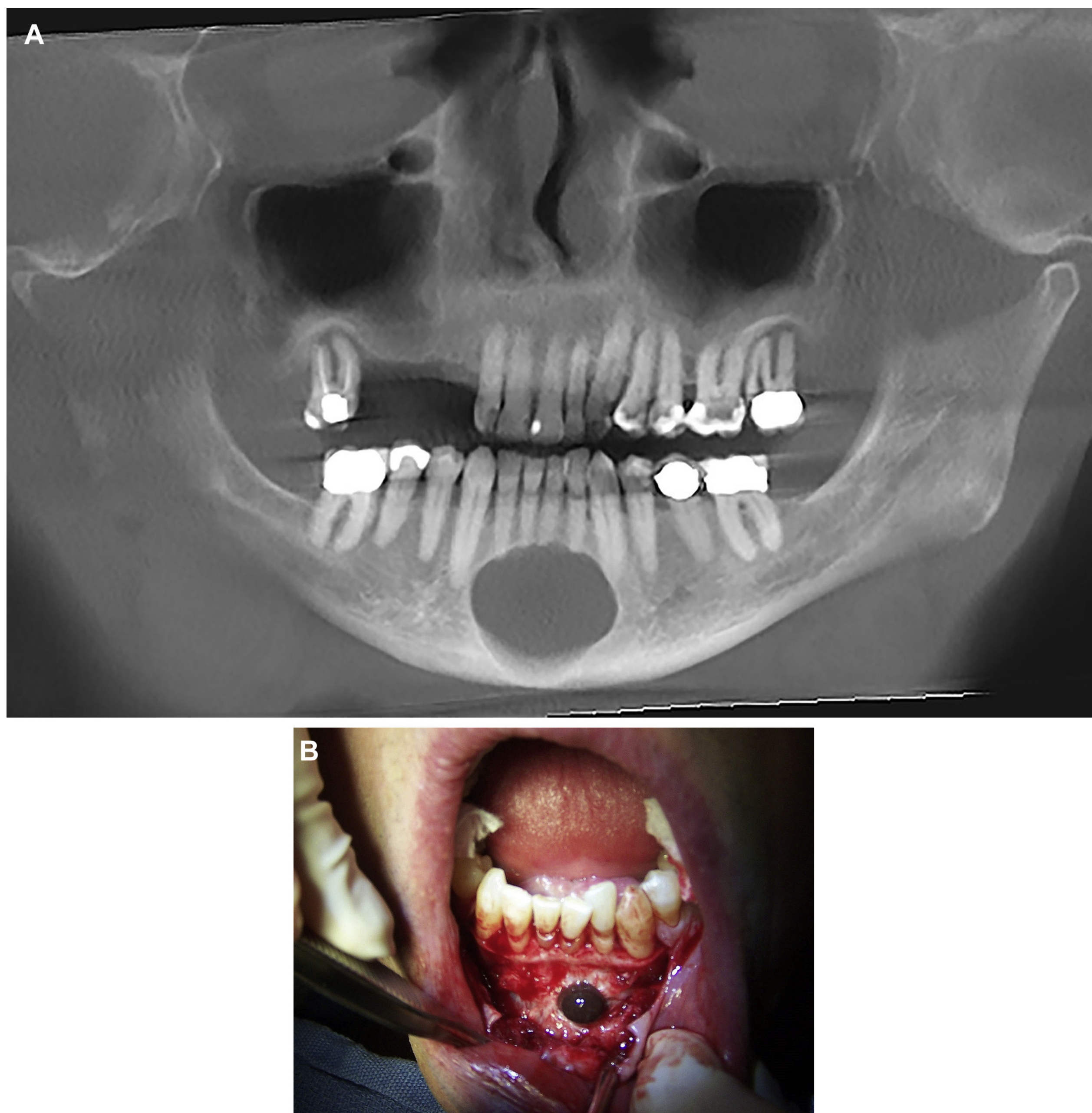

FIGURE 1. *A*, A well-circumscribed unilocular radiolucency extending from the apices of mandibular right to left canines. *B*, The cyst bulged from the facial aspect of the anterior mandible. **(Fig 1 continued on next page.)**

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developed numbness of his lower lip and chin of the right side 3 days prior. His medical history was essentially noncontributory. He had been prescribed gabapentin, amoxicillin with clavulanic acid, and hydrocondone with acetaminophen by his primary care physician for a putative diagnosis of trigeminal neuralgia and sialadenitis. Eighteen years earlier, at 24 years of age, the patient had undergone in one operative session, segmented four-piece Le Fort I with wire osteosynthesis, bilateral inferior turbinectomies, bilateral mandibular sagittal split osteotomy with interpositional bone grafts, and rigid internal fixation and genioplasty to correct his vertical maxillary hyperplasia with anterior open bite and mandibular retrognathism. An excision was performed and diagnosed as a "glandular odontogenic cyst" at another institution. However, consultation with our service revealed a surgical ciliated cyst. His right mental nerve paresthesia resolved completely after removal of the cystic lesion.

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