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**CT of inspissated mucus in chronic sinusitis.**

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However, our search of the literature failed to disclose any report of FMD associated with fenestration of the cervicocephalic arteries; therefore, it is presumed that the association observed in the present patient was incidental. The clinical significance of fenestration of the vertebral artery has not been determined. An aneurysm susceptible to rupture may arise in the proximal portion of the fenestration as in the basilar, internal carotid, or intracranial arteries [5–7]. Fenestration without an aneurysm is probably innocuous, although fenestration may become a nidus for clot formation [2].

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## CT of Inspissated Mucus in Chronic Sinusitis

Many radiographic findings of paranasal sinusitis, both acute and chronic, have been described [1–3]. These findings are well demonstrated by CT and include mucosal thickening, sinus opacification, air-fluid levels, and both bony sclerosis and thickening. We present two cases having another radiographic manifestation of chronic si-

nusitis that is best shown by CT. In each case the sinuses had areas of high attenuation on CT with densities of about 105 to 125 H that were found to be secondary to inspissated mucus at surgery.

## Case Reports

### Case 1

A 25-year-old woman was evaluated because of a long history of recurrent allergic and infectious rhinosinusitis associated with polyposis. Plain radiographs revealed opacification of the frontal, ethmoid, and maxillary sinuses. CT without contrast enhancement revealed peripherally located soft-tissue density caused by mucosal thickening and polyposis in the sinuses (Fig. 1). Sharply demarcated regions of high density were identified centrally in the ethmoid and maxillary sinuses. A soft-tissue mass was seen in the left nasal airway. The patient underwent a left polypectomy, bilateral Caldwell-Luc procedures, and bilateral transantral and transnasal ethmoidectomies.

### Case 2

A 22-year-old woman was evaluated because of a long history of chronic sinusitis. The physical examination revealed severe edema of the nasal turbinates and mucopurulent material in the right nasal cavity. Plain radiographs revealed prominent opacification of the paranasal sinuses. CT without contrast enhancement showed areas of mucosal thickening and polyposis in the frontal, ethmoid, and maxillary sinuses (Fig. 2). Centrally located areas of high density were identified. The patient underwent bilateral transorbital ethmoidectomy, frontal sinusotomy, and bilateral Caldwell-Luc procedures.

In each case, at surgery the ethmoid and maxillary sinuses were found to be packed with inspissated mucus that had the consistency of putty. Pathologic examination revealed inspissated mucus and polypoid inflammatory tissue with no calcification. Cultures and smears did not reveal bacterial or fungal infection.

## Discussion

These cases show an additional radiographic finding of chronic sinusitis caused by inspissated mucus. The increased density of this material relative to that of mucosal thickening or fluid is best shown by CT and would not be appreciated by plain radiographic methods.

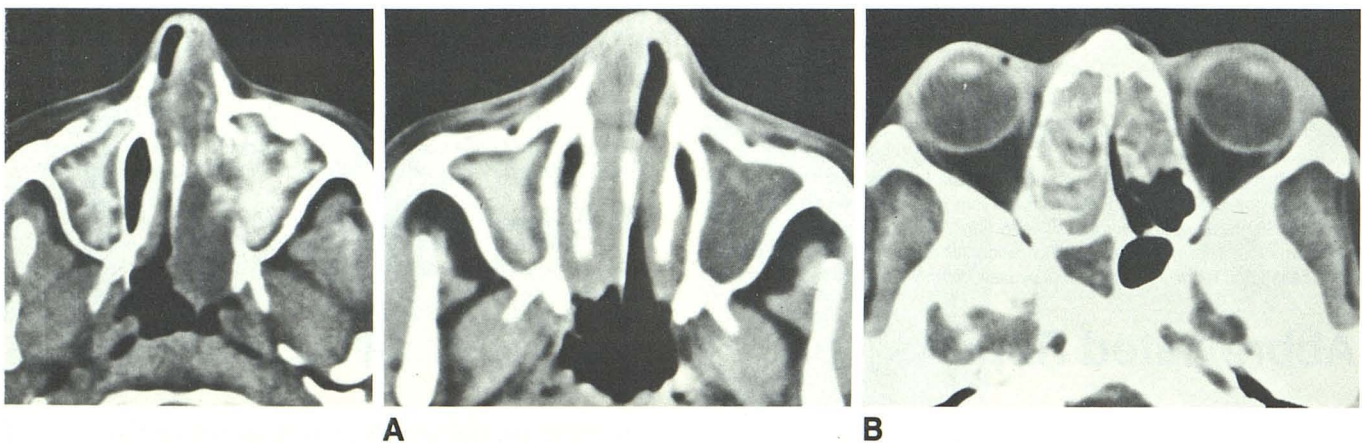


Fig. 1.—Axial CT scan shows areas of high attenuation in both maxillary sinuses and protrusion of soft-tissue mass from left maxillary sinus into nasal airway.

Fig. 2.—A, Axial CT scan shows central high density in right maxillary sinus with surrounding mucosal thickening. Left maxillary sinus contains soft-tissue density material. There is soft-tissue thickening in nasal airway.  
B, Axial CT shows high-density areas in ethmoid sinus with soft-tissue opacity of right side of sphenoid sinus.

The CT appearance of inspissated mucus could be mimicked by calcific concretions, such as those found in aspergillosis [4] or by IV contrast-enhancing mucous membranes. Our CT scans were not contrast-enhanced, and the pathologic specimens contained no evidence of calcification or fungal infection.

Because surgery only temporarily alleviates discomfort, otolaryngologists are reluctant to operate when treating patients with a history of allergic rhinitis, nasal polyposis, and recurring complaints of severe facial congestion. Because the trocar tends to become blocked by the thickened mucous membranes, antral lavage is often uncomfortable and less beneficial than in simple chronic sinusitis. Intranasal antrostomy is conservative surgery for debridement of the maxillary sinuses. In these patients, however, the antrostomy through the nose would have been inefficient because of the putty-like consistency of the material filling the antra.

On the other hand, a radical Caldwell-Luc procedure allowed the disease to be removed fairly easily through an opening made into the canine fossa of the maxilla. This finding can enable the radiologist to predict the nature of the disease and counsel an aggressive surgical approach.

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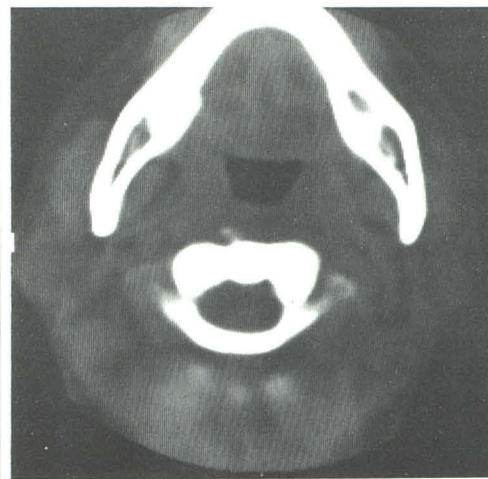
#### CT of Acute Cervical Tendinitis

A case of acute calcific tendinitis of the neck was studied with CT. The clinical presentation and routine radiographs suggested the diagnosis, but CT established it. The latter illustrated calcification of the longus colli muscle that was not seen on the radiographs. A similar case is described briefly.

Fig. 1.—Lateral cervical spine radiograph shows soft-tissue swelling anterior to upper vertebral bodies.



Fig. 2.—CT scan of C1-C2 spine shows soft-tissue swelling of right longus colli muscle as well as calcifications.



#### Case Report

A 32-year-old woman presented with a 2-day history of progressively severe pain in her neck. There was dysphagia, occipital pain, and cervical pain on motion of the neck. The patient was febrile and had mild leukocytosis. Cervical radiographs only showed soft-tissue swelling on the lateral view (Fig. 1). A localized CT scan of the upper cervical spine showed soft-tissue swelling and calcification anterior to C1 and C2 (Fig. 2). Thus, the diagnosis of acute cervical tendinitis was made and treatment with a cervical collar and analgesics was instituted. One week later she was asymptomatic and lateral cervical radiographs were normal. A repeat CT scan was thought to be unnecessary.

#### Discussion

Acute tendinitis of the neck (longus colli muscle) has been reported with increasing frequency in recent years and is similar to acute tendinitis of other joints in that there is pain, tenderness, and muscle spasm. In addition, radiographs show calcification and swelling anterior to C1 and C2, which are diagnostic in most instances [1-3].

The patient in this case had all the typical findings of acute tendinitis except that no calcification was visible on the radiographs. CT, with its superior contrast resolution, showed it. Thus, the suspected diagnosis was confirmed, patient and physicians were reassured, and conservative therapy was instituted without needless biopsies, antibiotics, or lumbar puncture.

Although a case report of CT diagnosis of calcific tendinitis of the longus colli has recently been published in a general radiology journal [4], neuroradiologists should be familiar with this disease as well as with the occasional help CT can provide. We have since seen an almost identical case that could only be diagnosed definitively by CT. Before the scan, meningitis and retropharyngeal abscess were considered. It should be remembered that routine radiographic studies are sufficient in most cases.

Although 36 cases have been reported in the literature, we feel it is much more common than that number would imply because one of the authors has seen nine cases in approximately 10 years. Apparently, many physicians are not aware of this condition.

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