

# Mucocele

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A [mucocele](#) is a cystic and expansive lesion of the [sinus](#) cavities.

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Any dilatation (typically pathologic) with an accumulation of mucus. Examples include:

Oral mucocele

Mucocele of the petrous apex

[Paranasal sinus mucocele](#)

[Sphenoid sinus mucocele](#)

Mucocele of appendix

Gallbladder mucocele

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Harada et al. report a rare case in which a [pituitary tumor](#) co-occurred with a giant mucocele. The mucocele's computed tomography(CT)values fell markedly when it collapsed, and they report the associated considerations.

This case involved a 42-year-old male patient. For 20 years, his visual acuity had progressively declined, and it suddenly rapidly worsened over a month. Cranial CT revealed a massive tumor in the [sphenoid sinus](#) and a pituitary tumor. A region of high absorption extended from the [paranasal sinus](#) to the [skull base](#). Two days after the patient's initial presentation, he experienced a sudden loss of [vision](#). Therefore, they performed an urgent re-examination. The CT value of the paranasal lesion was found to have sharply declined. The sinus lesion was diagnosed as a mucocele. Emergent endoscopic surgery was performed. [Actinomyces meyeri](#) was detected in the samples cultures.

The causes of mucocele exhibiting abnormally high signal intensity on CT include the accumulation of hemosiderin due to repeated bleeding in the cyst. Furthermore, we inferred that the Actinomyces

meyeri had been taking up metallic elements in vivo for a long time. The marked reduction in the lesion's CT value was considered to have been due to the destruction of the mucocele. The contents of the mucocele flowed out and were replaced with newly produced mucus, which exhibits low absorption values.

They treated a patient with a giant mucocele involving distraction of the frontal base and a pituitary neuroendocrine tumor. In such cases, surgery should be performed when visual acuity deteriorates suddenly <sup>1)</sup>.

## Complications

Intracranial extension and superinfection of these lesions are rare but serious complications of chronic mucoceles.

## Case reports

A patient with a known mucocele, initially lost to follow-up, who presented three years later with headache, purulent rhinorrhea, and intracranial extension of his mucocele with development of an epidural abscess. This case highlights the potential complications of chronic, large mucoceles and emphasizes the importance of thorough evaluation in patients with facial abscesses in the setting of known sinus pathology. Any mucocele with signs of superinfection such as purulent rhinorrhea, abscess near the sinuses, or refractory symptoms should warrant cranial imaging. Mucoceles with evidence of intracranial extension require neurosurgical and/or otolaryngologic evaluation for evacuation and debridement to avoid neurologic injury or devastating infection <sup>2)</sup>.

<sup>1)</sup>

Harada N, Sakaeyama Y, Node Y, Okonogi S, Ueda K, Andoh S, Masuda H, Kondo K, Nemoto M, Sugo N. [Acute Changes in the Computed Tomography Findings of Mucocele Combined with pituitary neuroendocrine tumor:A Case Report]. No Shinkei Geka. 2018 Nov;46(11):1013-1020. doi: 10.11477/mf.1436203856. Japanese. PubMed PMID: 30458439.

<sup>2)</sup>

Naik D, Aten K, Lopez D, Patel J. A Real Headache: Intracranial Extension and Epidural Abscess As Complication of Chronic Mucocele. Cureus. 2023 Dec 3;15(12):e49875. doi: 10.7759/cureus.49875. PMID: 38170035; PMCID: PMC10760984.

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