Neurosurgery Wiki - https://neurosurgerywiki.com/wiki/

## Sinusitis complications

- Microcatheter navigation using a large compliant balloon placed in a cortical vein during transvenous access
- Clinical presentation and patient outcomes following endovascular intervention for venous sinus diverticula: A single center experience
- Quantification of the Dynamics of the Vascular Flows in the Cerebral Arterial and Venous Trees
- Management of cerebrospinal fluid leaks from lateral sphenoid sinus wall: Tailored approach based on proposed zone-wise classification
- Traumatic Venous Sinus Thrombosis: Patient and Practice Patterns at a Major Trauma Center
- Upper extremity transvenous access in neurointerventional procedures: Insights from the largest single-center experience
- Spontaneous extensive pneumocephalus following frontal sinus defect
- Neurovascular Pathology in Intracranial Mucormycosis: Treatment by Cranial Bypass and Literature Review

Orbital cellulitis.

Subperiosteal abscess.

Orbital abscess.

Mastoiditis.

Frontal or maxillary osteomyelitis.

Subdural abscess.

Cavernous sinus thrombosis.

Brain abscess.

Intracranial complications of sinusitis are rare but life threatening. Intracranial complications of sinusitis and AOM are best managed in a specialist centre with multidisciplinary input. Concurrent ORL and neurosurgical intervention reduces abscess recurrence and requirement for revision neurosurgery in sinogenic complications and should represent the standard of care. Endoscopic sinus surgery is the ORL modality of choice in experienced hands <sup>1)</sup>.

## **Brain abscess**

Brain abscesses caused by sinusitis are rare in the antibiotic era.

## **Case reports**

A rare case of a brain abscess located mainly in the frontal lobe after sinusitis, which was initially thought to be meningitis or encephalitis. A 39-year-old man was transferred to the hospital from another neighbouring hospital with tonic-clonic seizures, severe headache, and purulent nasal

secretions. For one week, he was taking antibiotics for sinusitis. The computed tomography indicated lesions in the right sinuses but not in the parenchymal brain and thus antibiotics along with antiepileptic drugs were given. However, due to the deterioration of symptoms, magnetic resonance imaging was executed, which revealed an abscess in the frontal lobe. Afterward, an anterior ethmoidectomy and middle maxillary antrostomy were performed in order to drain the purulent content from the right sinuses. Ten days later, the patient presented disorientation and thus an open craniotomy for successful removal of the parenchymal abscess was performed. One month later, the patient was discharged with mild irritability, which was eliminated gradually over the next two months. Conclusively, brain abscesses can be caused by local spread from an infection of the paranasal sinus. The contribution of imaging modality is very significant not only for the early diagnosis but also for the therapeutic management of such cases. Frequently antibiotic treatment is insufficient and surgery may be required <sup>2</sup>.

## **Case series**

Twenty-one patients with intracranial sinogenic complications were treated at the Department of Otolaryngology in Poznan during that time.

Brain abscesses were the most common complications. Intracranial complications of sinusitis rarely occurred in isolation, often coexisting with other intracranial pathologies. A significant increase in the incidence was recorded in 2013. Treatment involved concurrently alleviating inflammation in the sinuses through implementation of broad-spectrum antibiotics for several weeks and decompressing the organized intracerebral abscesses, empyema, epidural and/or subdural abscesses under control of neuronavigation. There were no patient deaths recorded in the analyzed period. Conclusions The risk of developing intracranial sinogenic complications is low but invariably present and should be included in the differential diagnosis. Since the incidence of intracranial complications may increase in the course of prevailing viral infection, it should raise diagnostic vigilance <sup>3)</sup>.

1)

Sexton GP, Nae A, Cleere EF, O'Riordan I, O'Neill JP, Lacy PD, Amin M, Colreavy M, Caird J, Crimmins D. Concurrent management of suppurative intracranial complications of sinusitis and acute otitis media in children. Int J Pediatr Otorhinolaryngol. 2022 Mar 4;156:111093. doi: 10.1016/j.ijporl.2022.111093. Epub ahead of print. PMID: 35272257.

Michali MC, Kastanioudakis IG, Basiari LV, Alexiou G, Komnos ID. Parenchymal Brain Abscess as an Intracranial Complication After Sinusitis. Cureus. 2021 Aug 22;13(8):e17365. doi: 10.7759/cureus.17365. PMID: 34567904; PMCID: PMC8454594.

Szyfter W, Kruk-Zagajewska A, Bartochowska A, Borucki Ł. Intracranial complications from sinusitis. Otolaryngol Pol. 2015;69(3):6-14. doi: 10.5604/00306657.1156326. PubMed PMID: 26388244.

From: https://neurosurgerywiki.com/wiki/ - **Neurosurgery Wiki** 

Permanent link: https://neurosurgerywiki.com/wiki/doku.php?id=sinusitis\_complications

Last update: 2025/02/08 23:33

