

Rhinosinusitis complicated by a carotid infection:

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Introduction

- Acute and subacute rhinosinusitis, may contribute to fatal vascular complications.
- Infectious arteritis of the internal carotid artery (ICA): very infrequent.
- Disastrous consequences: stroke, cerebral hemorrhage, and death.

Matériels et méthodes/Objectives

- We report one case of infectious arteritis of the ICA inducing stroke associated with invasive mucormycosis
- The purpose: to increase clinicians' understanding of the pathophysiology, clinical presentations, and treatment of this complication.

Résultats

- 68-year-old woman, followed for type 2 diabetes mellitus
- **Symptoms:** 7-day history of Headache, right-sided periorbital oedema, eye pain, and decreased visual acuity.
- **Nasal endoscopy:**
 - Inferior turbinate: ulcerated lesion covered with a crust
 - Middle meatus: pale appearance of the mucosa
- **Ophthalmological examination:** right eye
Decreased vision / Non-reactive pupil / ophthalmoplegia

- **MRI:**
 - Ethmoidal, sphenoidal, frontal and right maxillary sinusitis
 - Right orbital cellulitis and exophthalmia.
 - No evidence of cavernous sinus thrombosis or other signs of vascular complications.

- **Surgery:** Endoscopic sinus surgery
- Debridement of necrotic tissue and infected mucosa : maxillary, ethmoidal, and sphenoidal sinuses.
- ➔ Final pathology and culture: mucormycosis

- **Medical treatment:**
 - Amphotericin B : one month
 - Posaconazole (oral relay)

- **Evolution :**
 - Temporary improvement
 - Recurrence of periorbital oedema on the right side / Worsening vision
 - Hemiplegia.

Résultats

- **Gadolinium-enhanced MRI:**
 - Ipsilateral septic cavernous sinus thrombosis
 - infectious arteritis and thrombosis of the ICA

- **Diffusion-weighted MR:** ischemic cerebral lesions.
- **MR angiography:** Absent flow within the right ICA.



MRI T2-weighted image

Lack of a flow void with high signal intensity in the cavernous portion of the right internal carotid artery (arrow), suggestive of occlusion



MRI T1-weighted image

Abnormal enhancement along the thrombosed right internal carotid artery (arrow).

- **Treatment:** Anticoagulant therapy + Antifungal treatment.
➔ The patient died five months after beginning treatment

Conclusion

- Infectious arteritis of the ICA secondary to sinusitis: a potentially fatal disease.
- Involvement of the arterial vascular system is rare, but increasingly recognized with modern neuroimaging.
- Mechanism: Inflammation or direct invasion of the adjacent internal carotid artery.
- Lead to: Intraarterial thrombosis / Aneurysm formation / Rupture.
- Rapid diagnosis and treatment may improve patient outcome.

Références

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