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Introduction

- Pseudoaneurysm of the internal carotid artery (ICA) is a rare complication of head and neck infection.
- To date, literature on managing ICA pseudoaneurysm associated with otologic infections has been limited to case reports.
- We present a case of a petrous internal carotid pseudoaneurysm secondary to skull base osteomyelitis and a literature review.

Methods

- A literature review was conducted using PubMed with search terms (ear infection) AND (carotid artery pseudoaneurysm).
- 156 studies were reviewed by their abstracts resulting in eleven studies relevant to our case. The references from these studies were also reviewed yielding five additional unique case reports.

Our Case

History

- 56-year-old female with inflammatory arthritis on immunosuppressive medication.
- History of left ear cholesteatoma s/p canaloplasty and mastoidectomy in 2023; course complicated by poor wound healing.
- Presented to ED after episode of acute otitis media with bloody otorrhea and imaging consistent with skull base osteomyelitis and ICA pseudoaneurysm.

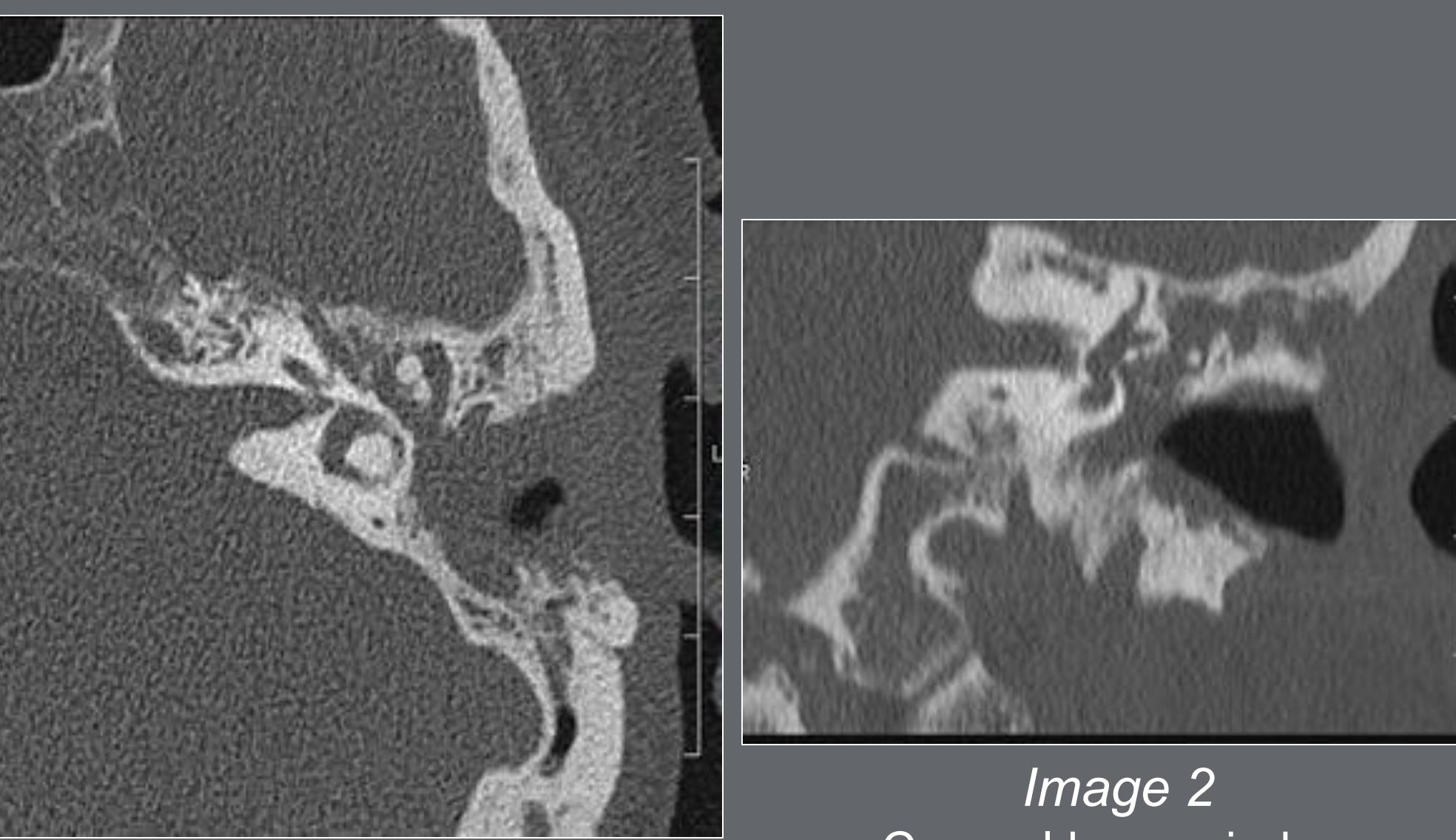


Image 1
Axial bone window demonstrating postoperative changes and bony erosion

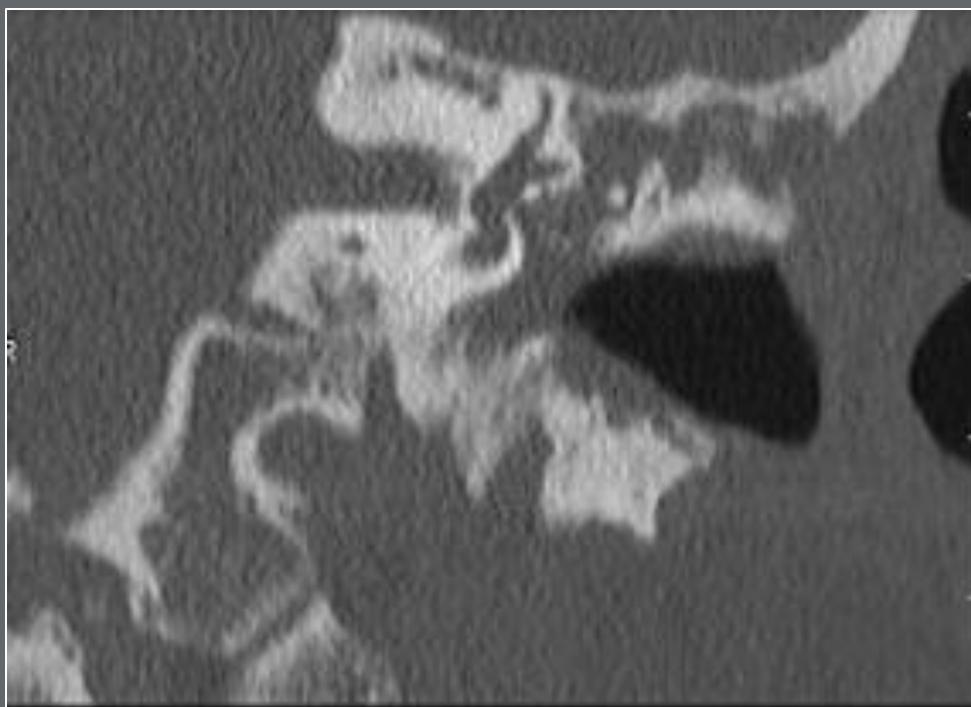


Image 2
Coronal bone window demonstrating post operative changes and bony erosion

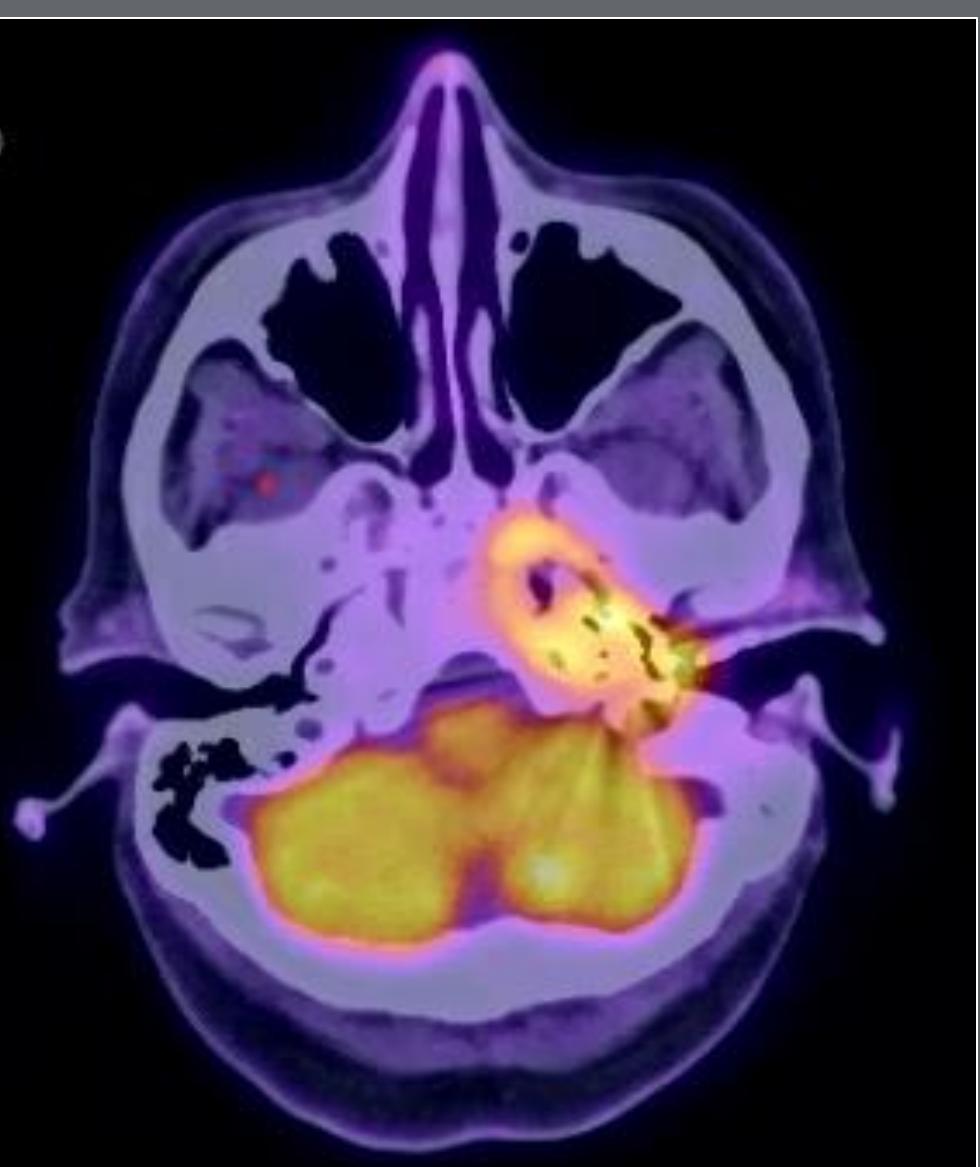


Image 3
PET CT demonstrating FDG avidity in the left petrous temporal bone consistent with SBO

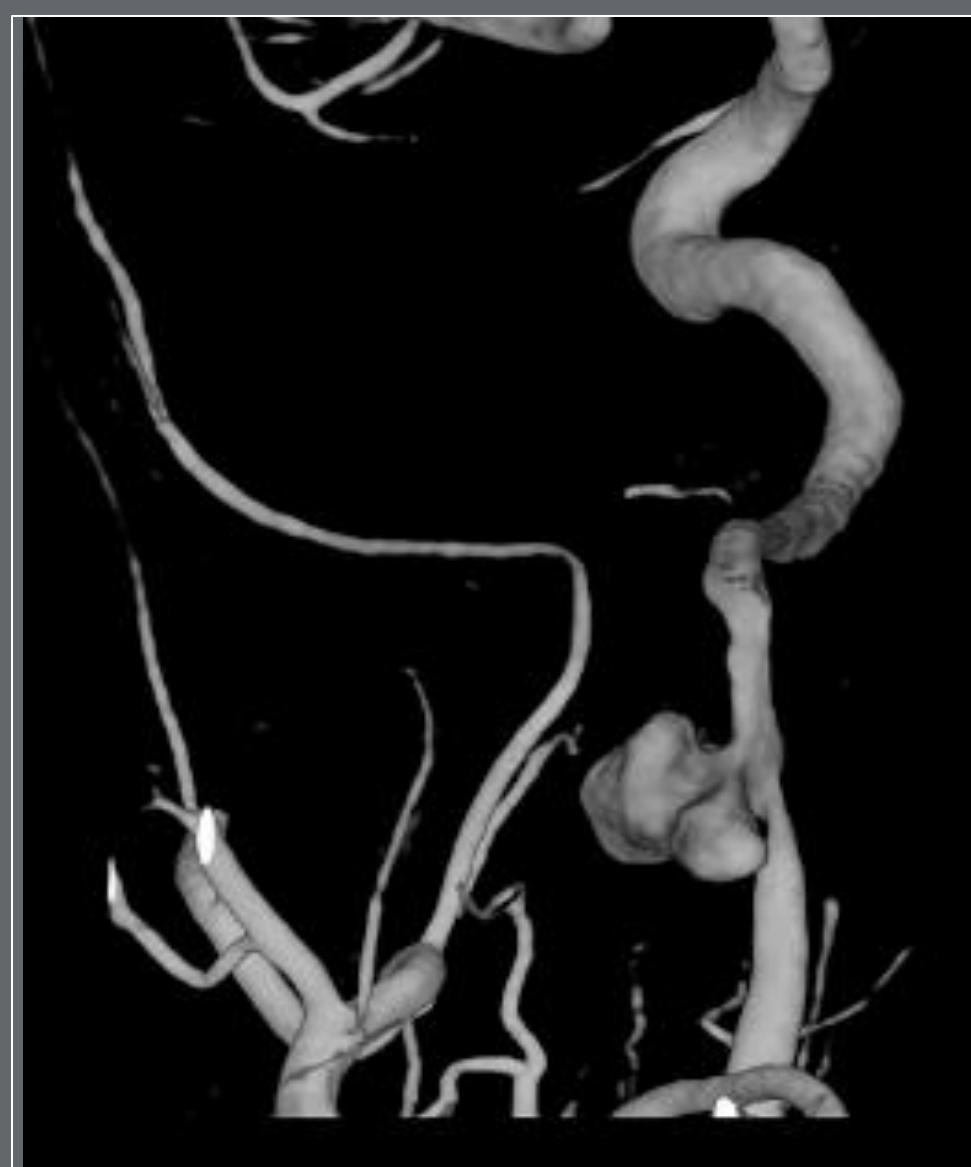


Image 4
DCA demonstrating cervical petrous junction ICA pseudoaneurysm

Treatment and Follow-Up

- Successful IR embolization of left cervical and petrous ICA
- Received 6 weeks of meropenem and posaconazole
- Continues to have near normal inflammatory markers
- Most recent PET CT demonstrated significant improvement in the FDG avidity of the left temporal bone.

Literature Review

Total Cases Reported in Literature	17
Age Range (mean)	2 - 86 (67)
Percent Male	59%
Most Common Comorbidity	53% (Diabetes)
Organism Isolates	47%
Most Common Location	Petros (53%)
Intervention	IR procedure (94%)
Mortality	6%

Discussion

- Carotid pseudoaneurysm is a rare, potentially life-threatening complication of an otologic infection.
- Our patient was successfully treated with endovascular embolization and long-term antimicrobials, in line with the existing literature.