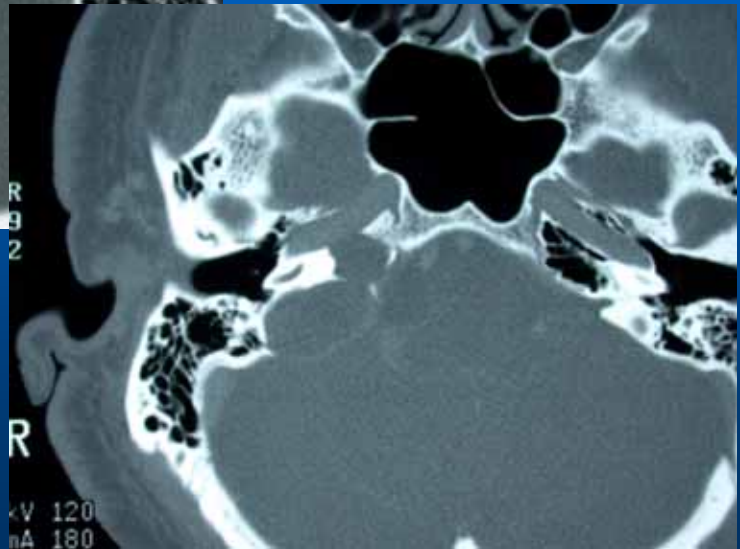
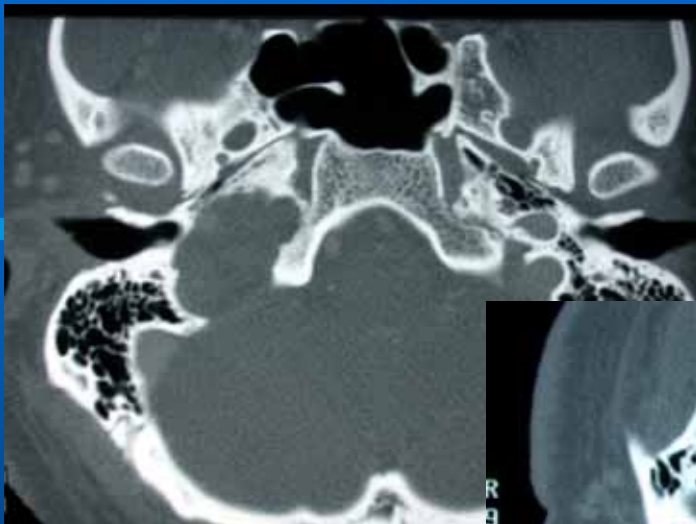


**Cholesterol
angioma**

Is aeration necessary ?

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Cholesterin granuloma

- **1st described 1940's**
- **Interosseous cyst**
 - Dark, viscous brown fluid
 - Granulation tissue
 - Birefringent cholesterin crystals
- **Fibrous capsule but no epithelial lining**

Pathophysiology

- **Catabolic rx to blood breakdown products**
 - Neg pressure 2° ETD or mucosal edema
 - Free cholesterol incites granulomatous rx
 - Animal data

Jackler

- **Transudative hemorrhage rarely follows ETD**
- **CG occurs in extensively pneumatized T bones which rarely have COM**
- **A single episode of bleeding should equalize pressure and stop process**

Jackler & Cho: Otol Neurotol 2013

Jackler & Cho

- **CG 2° to exposed marrow which can lead to repeated bleeding**
 - 6 of 13 pts with CG had such dehiscences (contralateral) but no controls with extensively pneumatized bones did

Jackler & Cho: Otol Neurotol 2013

DX

- MRI and CT
- MRI
 - BRIGHT ON T1 & T2; NO ENHANCEMENT
- CT
 - Loss of septation; erosion of clivus/IAC
 - Expansion with dissolution/remineralization

Treatment

- Is it symptomatic?
- Do symptoms correlate with lesion?
- Surgical removal
 - Infralabyrinthine
 - MCF
 - Translab/transcochlear
 - Transphenoidal

S&S: Brackmann & Toh

- HL 65%
- Dizziness 56%
- Tinnitus 50%
- Headache 32%
- Facial twitching 23%
- Facial numbness 21%
- Facial weakness 3%

Jackler & Toh: Otol & Neurot 2002

S&S

- Hughes: most seek intervention for HA
- Mosnier:
 - 8/12 had cochleovestibular
 - 4/12 HA 3 w paresthesias 1 w 6th
 - 2 w MEE

Mosnier: Oto & Neurotol 2002

UTSouthwestern

- **N = 17 pts/ 19 CGs**
- **S&S**
 - HA 8
 - Vertigo 4
 - HL 5
 - FN 6
 - 6th 3

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- **MCF 10**
- **Trans coch/lab 4**
- **Infralabyrinthine 3**
- **Transsphenoid 2**

UTSouthwestern: recurrences

- **5 recurrences – all had increase size on scan**
 - 4 HA
 - 1 6th
- **3 MCL, 1 translab, 1trancoch**
- **None aerated**
- **2 remineralized**

Brackmann & Toh: recurrences

- **5 recurrences**
- **5/34 aerated---all infracochlear**
- **4/5 had no stent. 1 stent occluded**

Conclusions

- Drainage may be necessary but aeration is probably not
- Supports Jackler's theory

