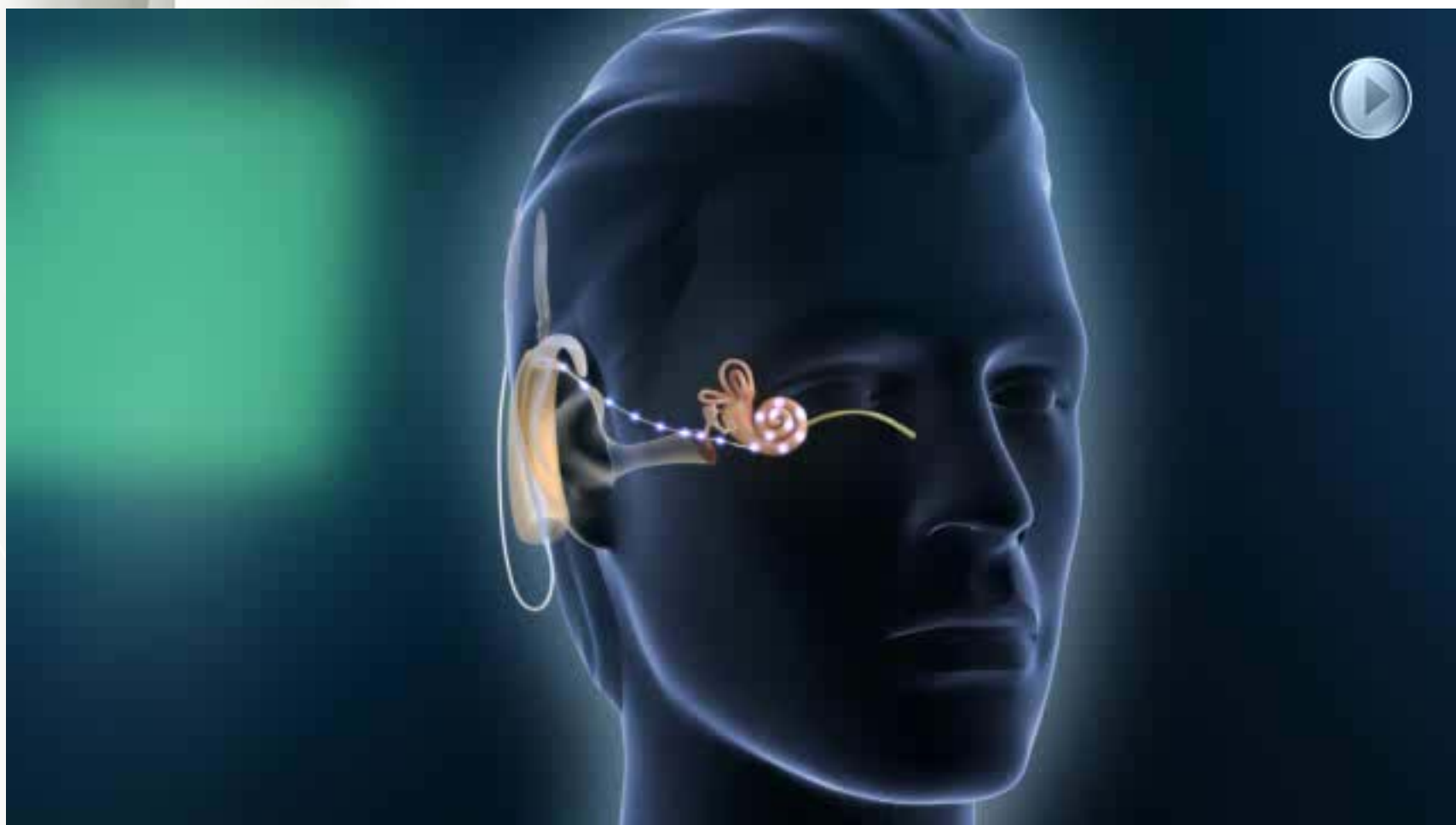


微創與困難人工耳蝸手術

台中慈濟醫院
聽語 人工耳蝸中心
吳弘斌 醫師

Wu Hung-Pin MD. PhD





微創人工耳蝸手術

- 微創切口
- 微創植入

台中慈濟聽語、人工耳蝸中心

The screenshot shows the Facebook profile of the '台中慈濟電音俱樂部 - 人工電子耳聯誼會' (Taichung Tzu Chi Hearing and Cochlear Implant Association). The page features a cover photo of a cochlear implant on an ear. The main content area includes a post from 田潔潔 (Tian Jie Jie) dated 1月30日, announcing the addition of 3 new photos to the album. The post text reads: '誠摯邀請您, 參與由台中慈濟醫院聽語、電子耳中心主辦之『104年度電音俱樂部聯誼會』。這次的聯誼會邀約本院的許權振 副院長、吳弘斌 主任、社工師與電子耳地區代理, 於會中說明電子耳相關議題, 內容有: 聽障基因介紹、微創及因聽電子耳手術介紹與電子耳的補助、保養相關問題討論。此外, 我們也邀請由本院手術之電子耳家庭, 來分享電子耳與刀前後聽能復健情形及其心路歷程。竭誠歡迎並期待您的蒞臨!' Below the post, there are navigation options for '台中慈濟醫院 聽語、電子耳中心'.

困難人工耳蝸手術

- 大前庭導水管症-oozing
-gusher
- 共同腔
- 耳蝸鈣化 耳硬化症
- 鼻咽癌, 慢性中耳炎
-two stage
-single stage
- 小耳症

尋回聲音，可以少些辛苦！

傳統傷口 (12~15cm)



微創切口 (2.2~2.5cm)

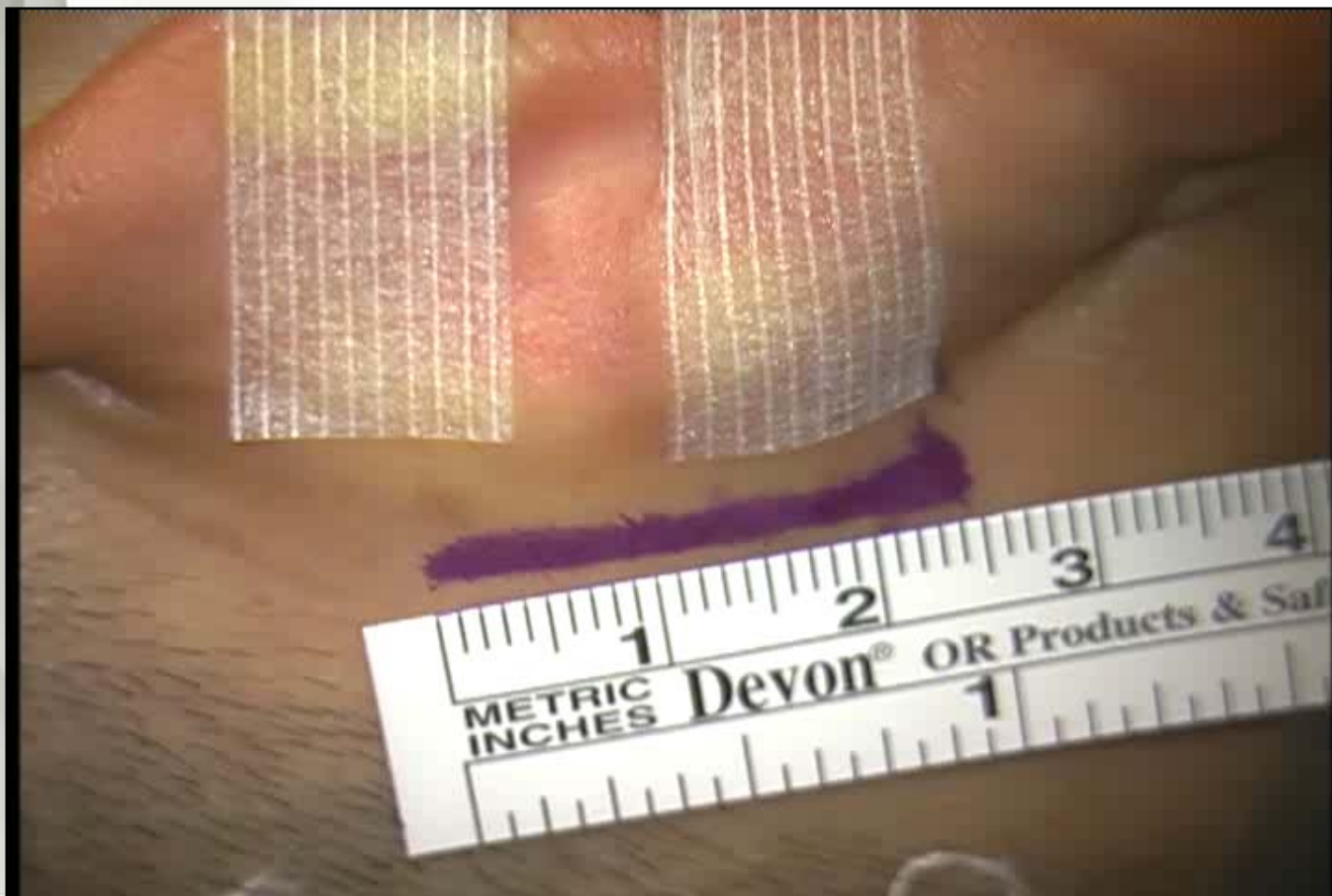


微創電極植入手術要素

- 植入時要避免血或骨塵帶入
- 放的速度要慢
- 使用低轉速磨圓窗四周骨頭
- 開洞要小 (約0.4mm)
- 一次就要成功



微創植入手術 (2.5cm)



不同植入口的殘餘聽力變化

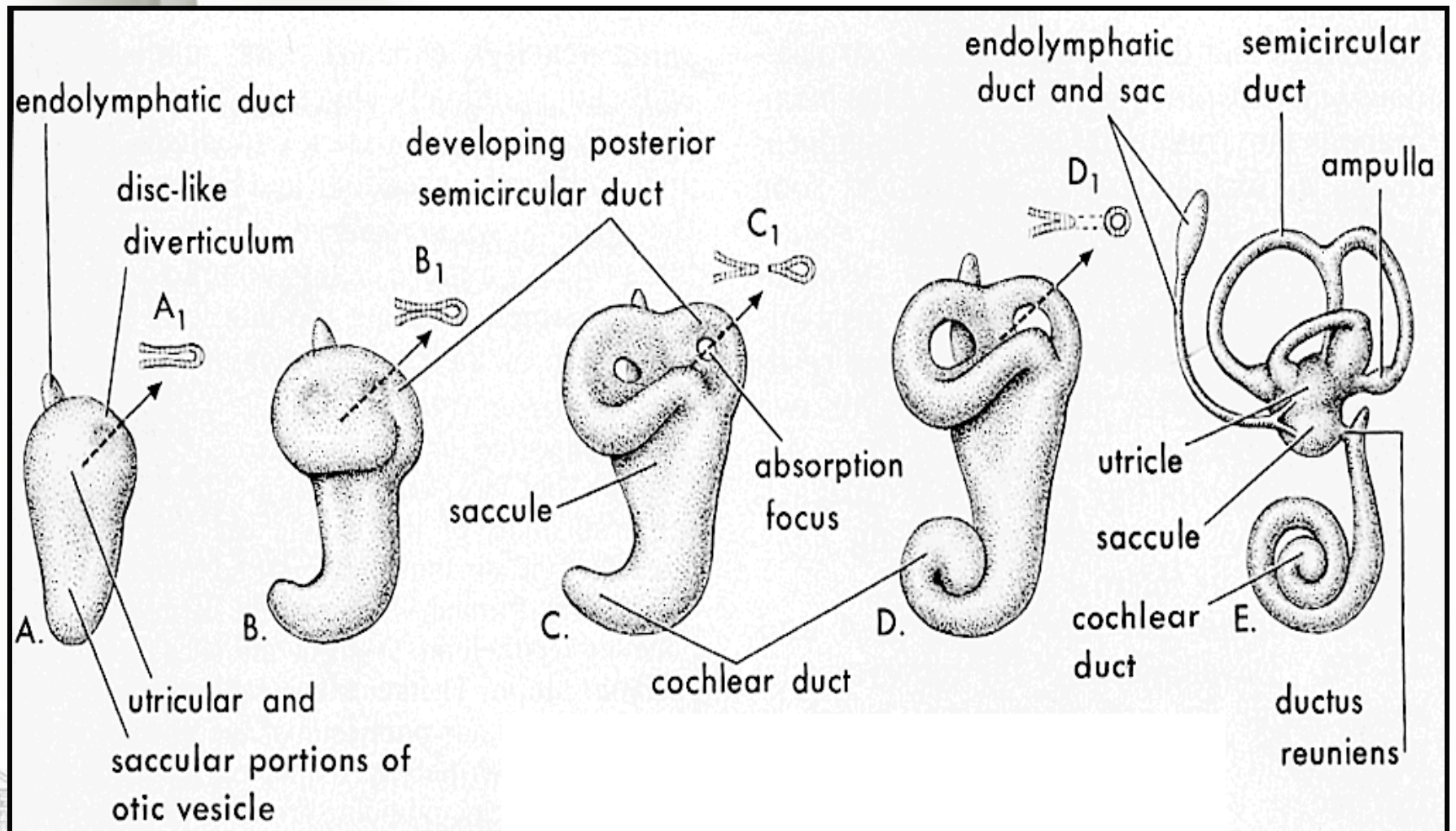
	耳蝸造口(20)	圓窗植入 (20)	p
PTA deterioration \leq 20dB (%)	16 (80%)	19 (95%)	0.157
PTA deterioration \leq 15dB (%)	16 (80%)	18 (90%)	0.382
PTA deterioration \leq 10dB (%)	13 (65%)	16 (80%)	0.471
PTA improvement \geq 10dB (%)	0	0	—

台中慈濟醫院 人工耳蝸手術計畫

- 第一天：住院
- 第二天：微創手術
- 第三天：拆包布、開機

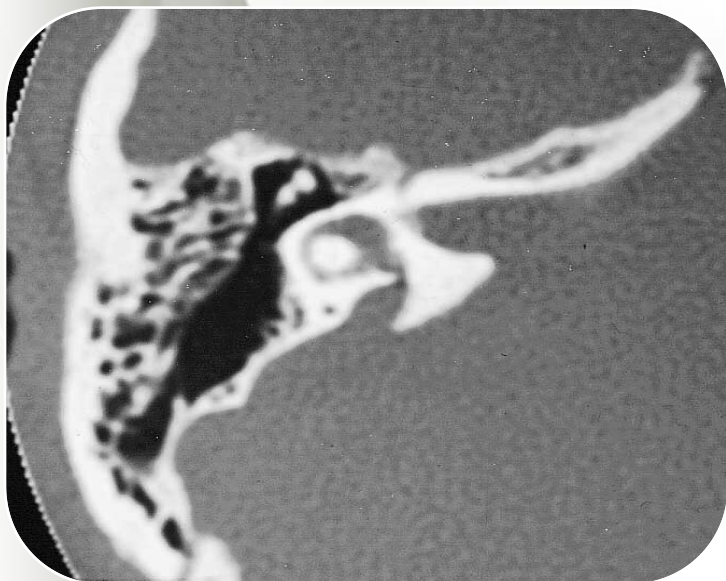
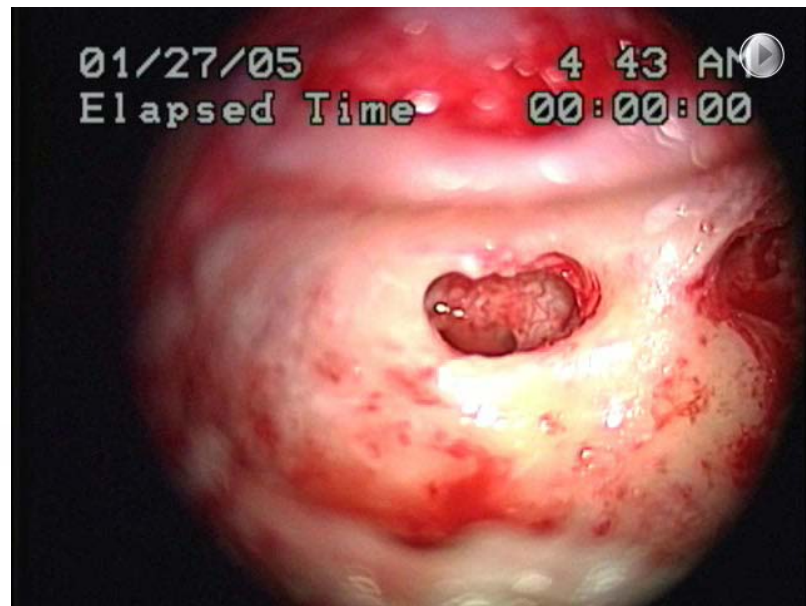


耳蝸的成長

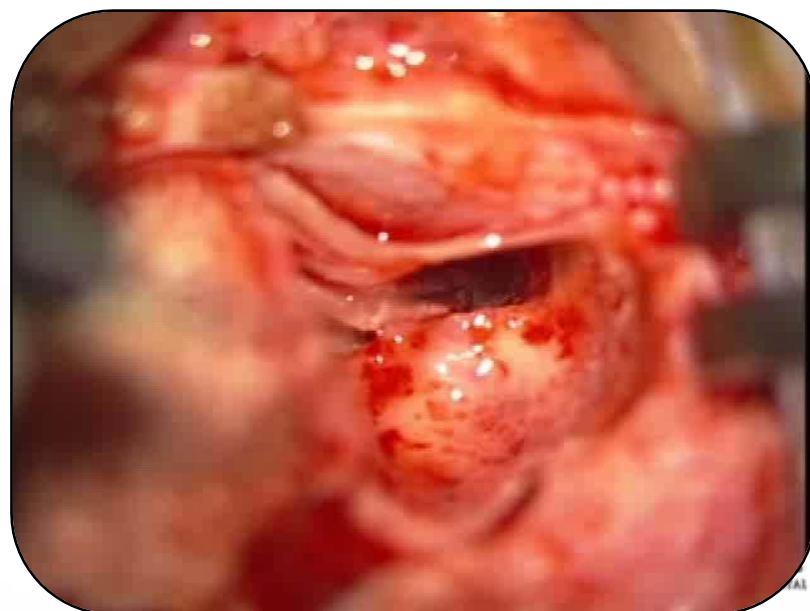


大前庭導水管

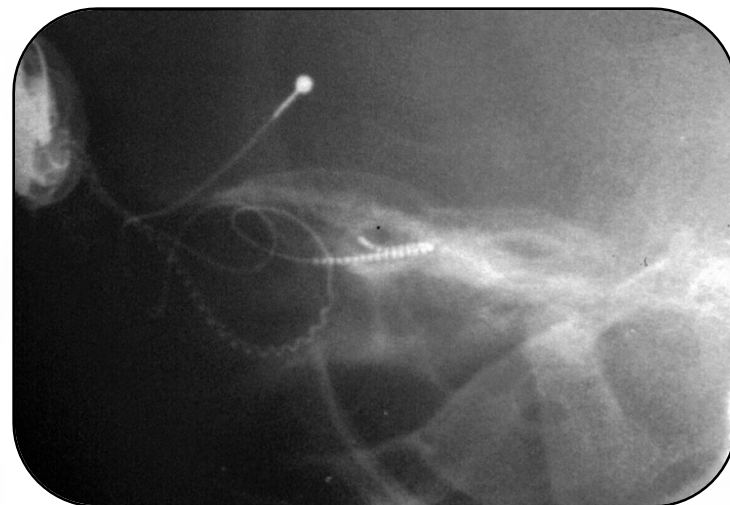
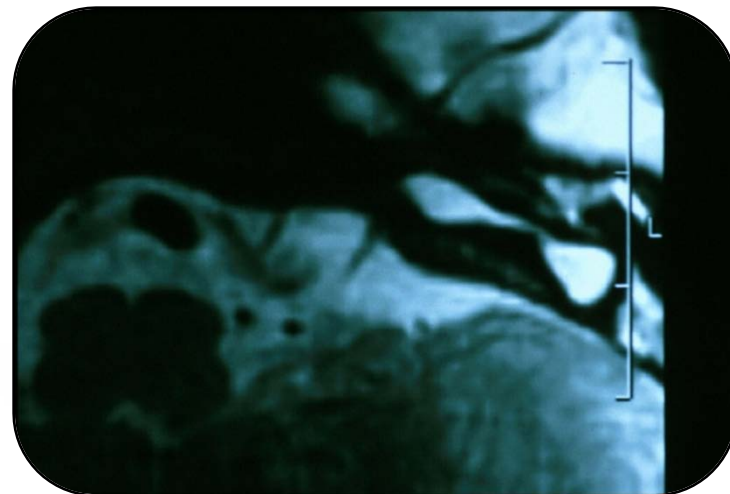
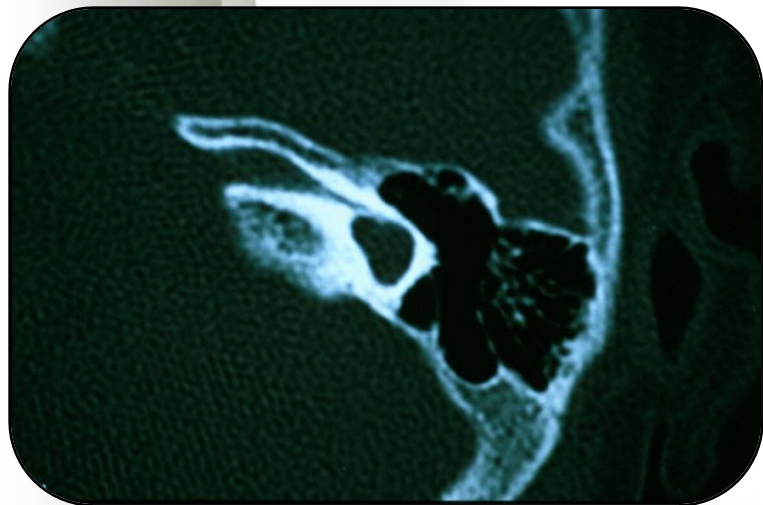
oozing



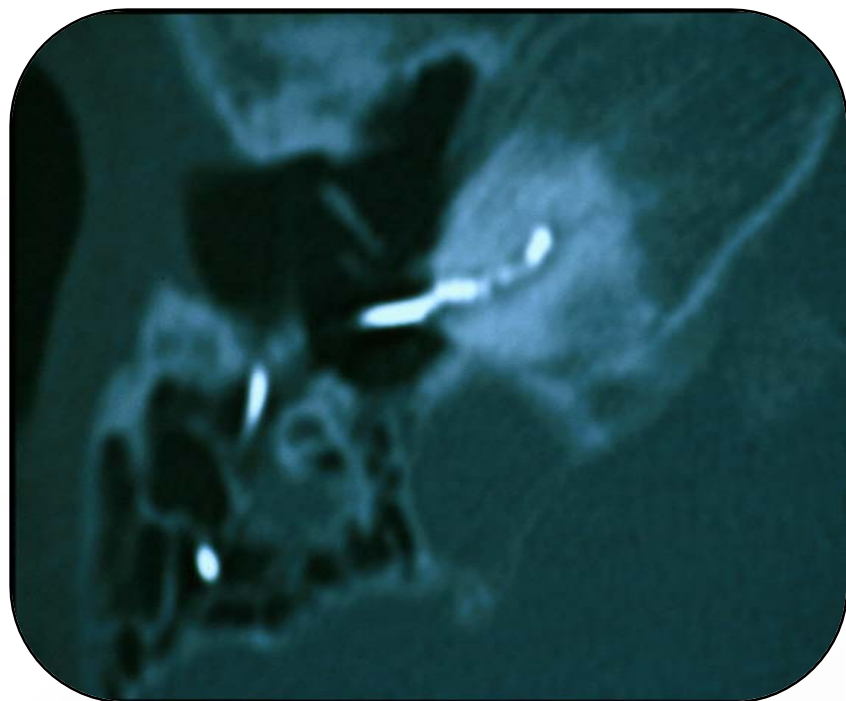
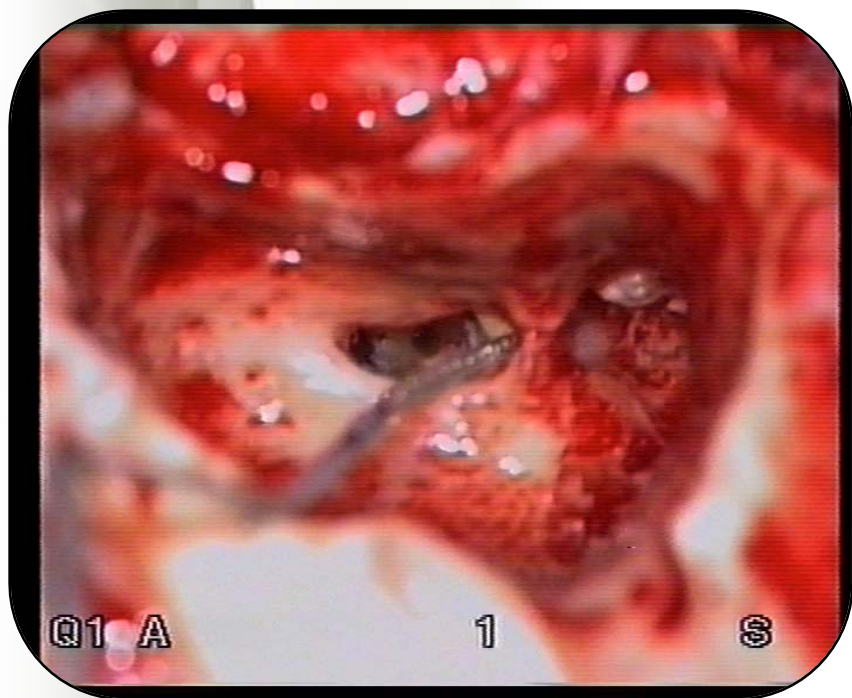
gusher



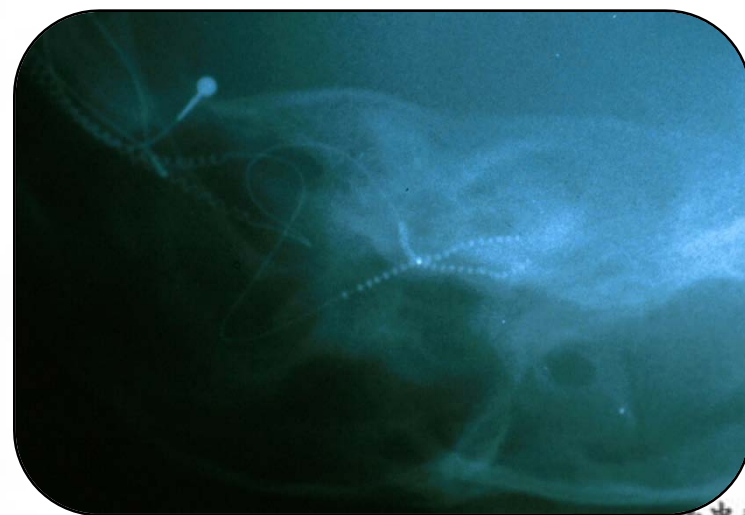
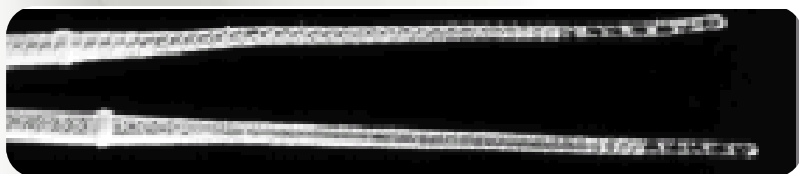
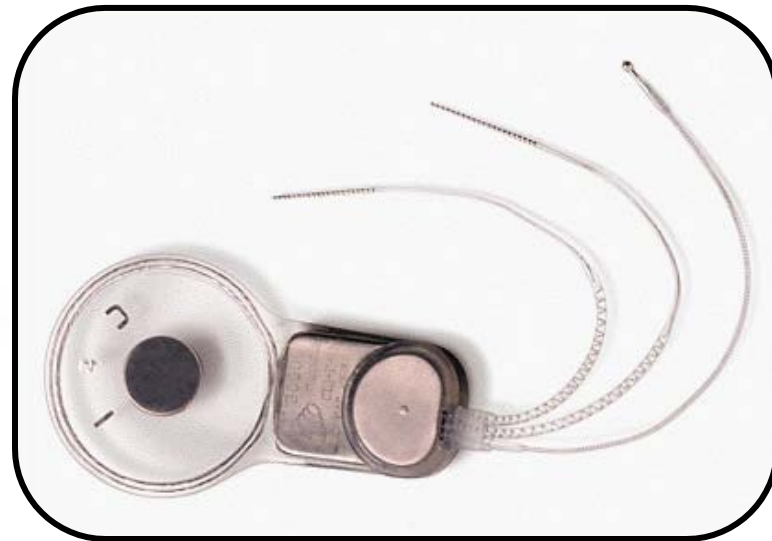
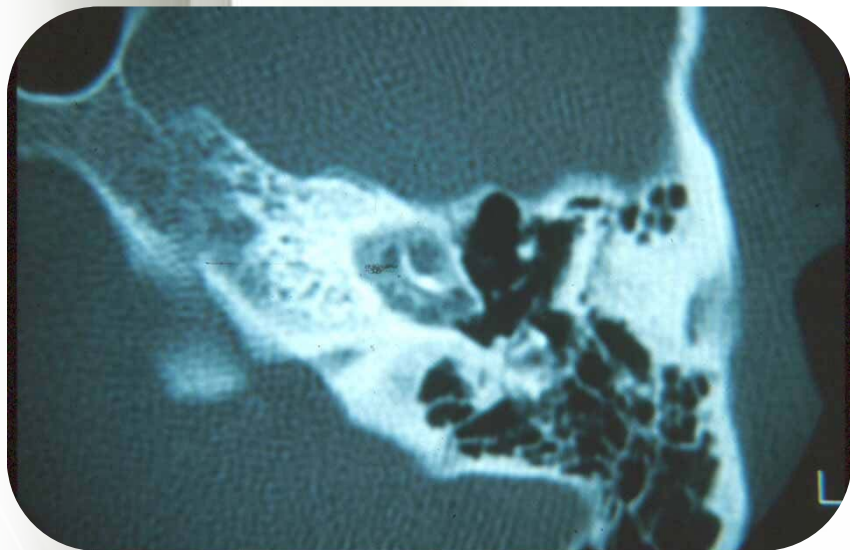
共同腔



耳蝸鈣化

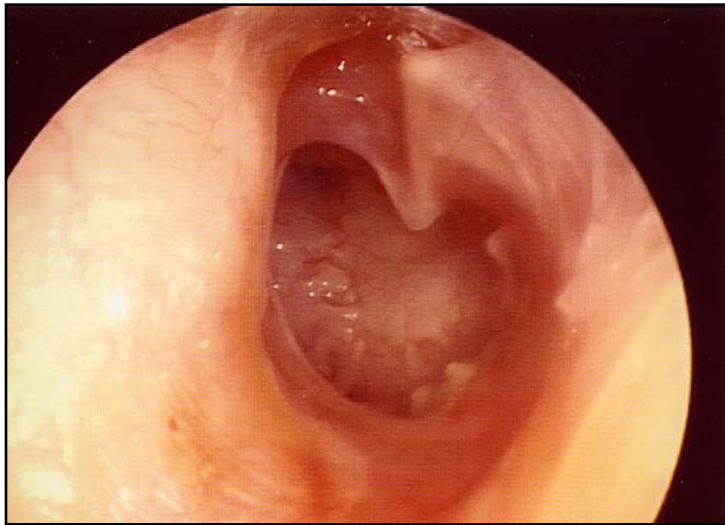


耳硬化症



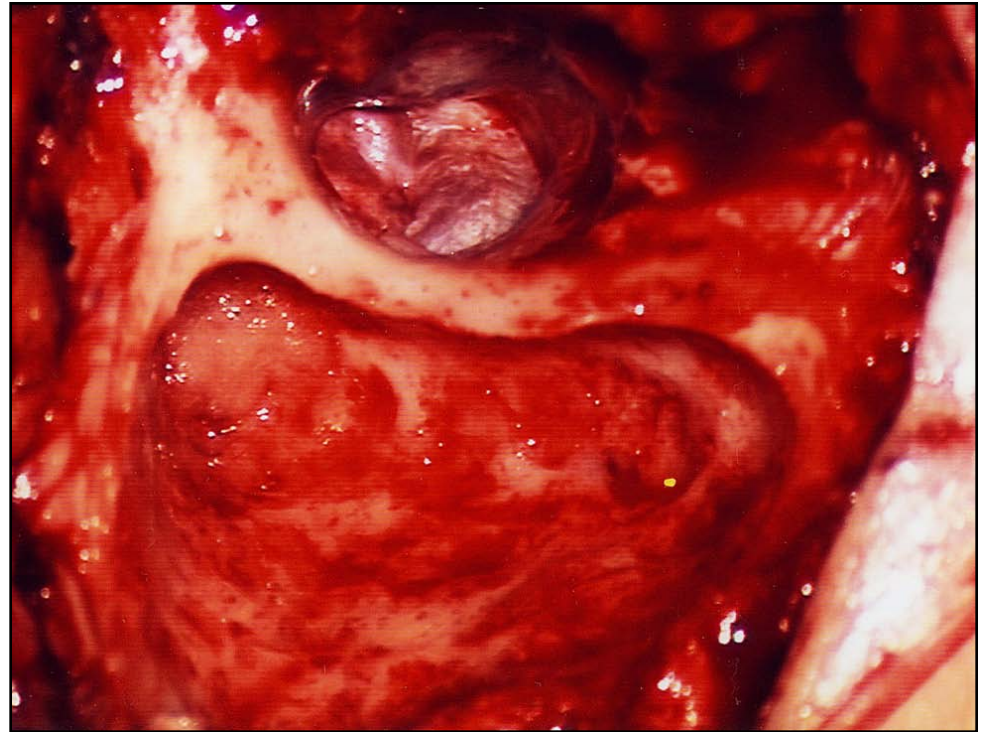
鼻咽癌與慢性中耳炎

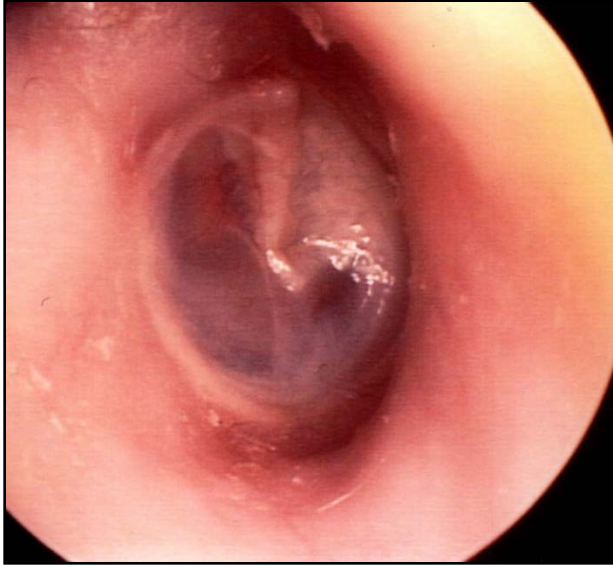
耳咽管功能佳 - two stage



Chronic perforation

Intact canal wall
Mastoidectomy &
Tympanoplasty



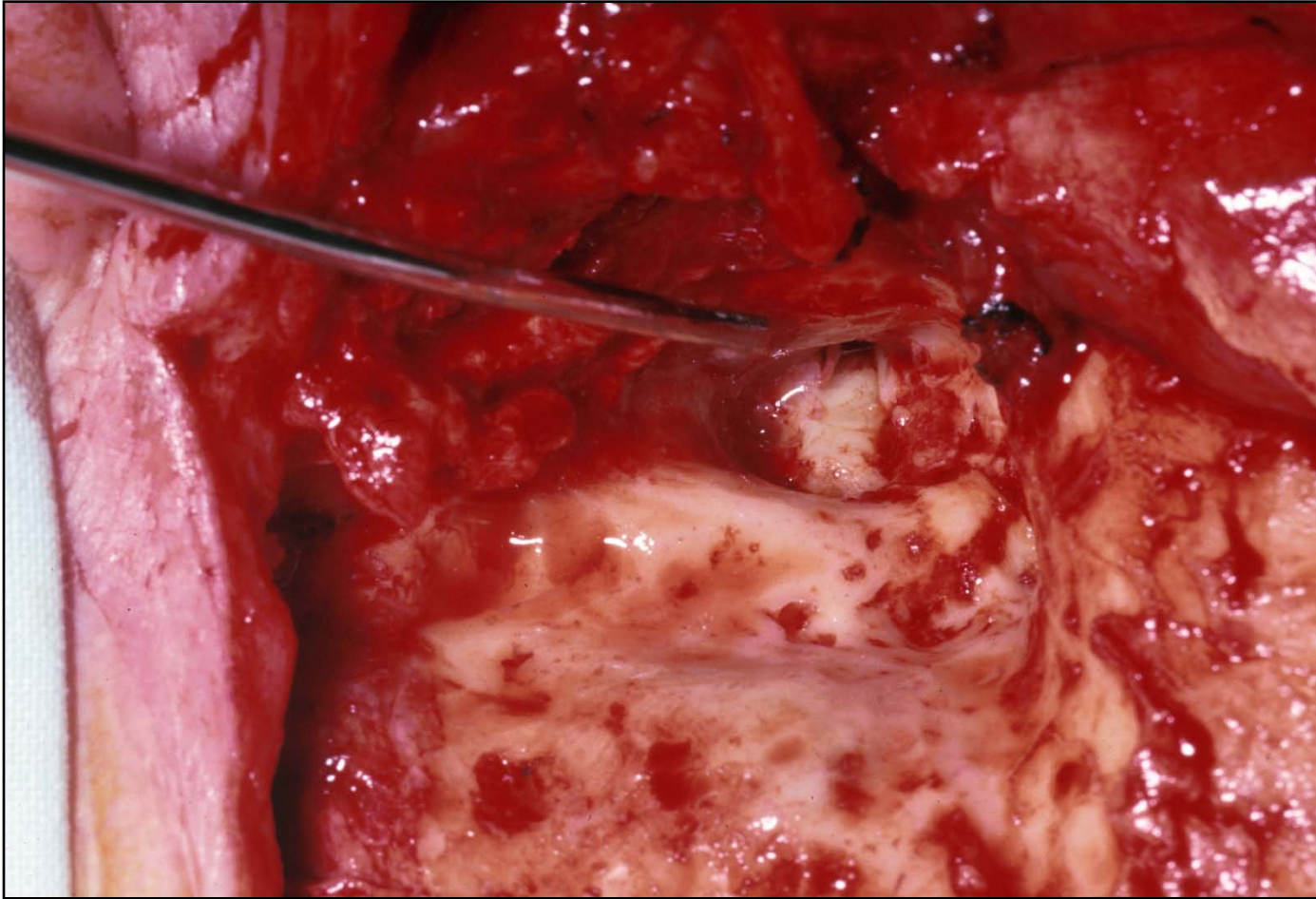


Healed Tympanic membrane

Aerated middle ear cleft

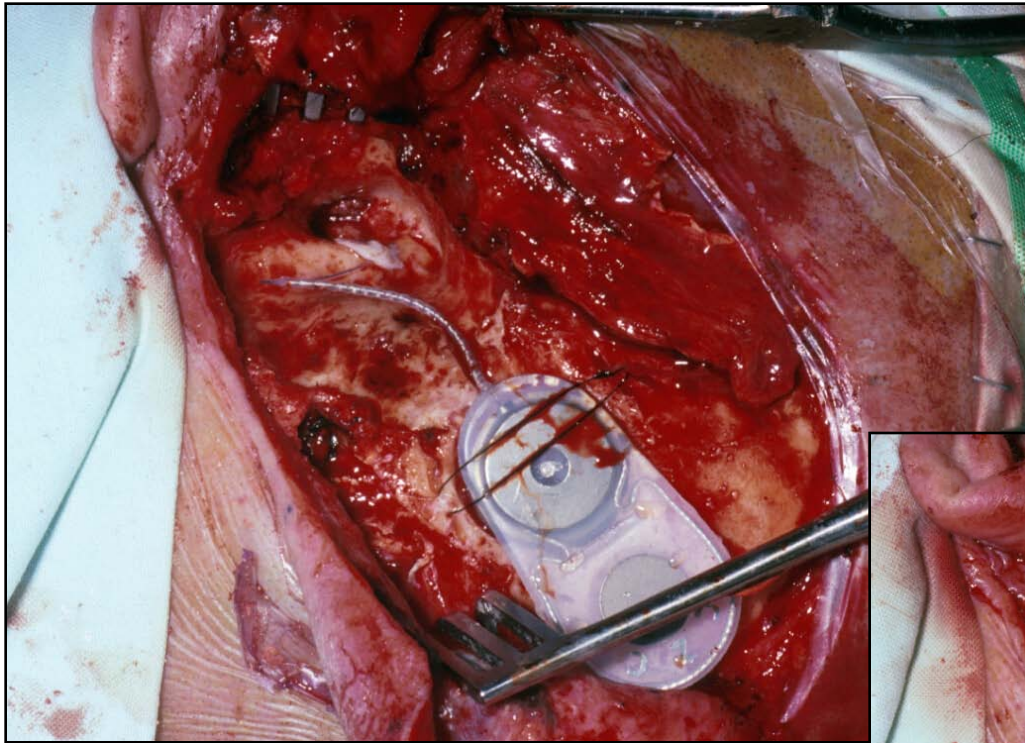


鼻咽癌與慢性中耳炎 耳咽管功能不好- one stage

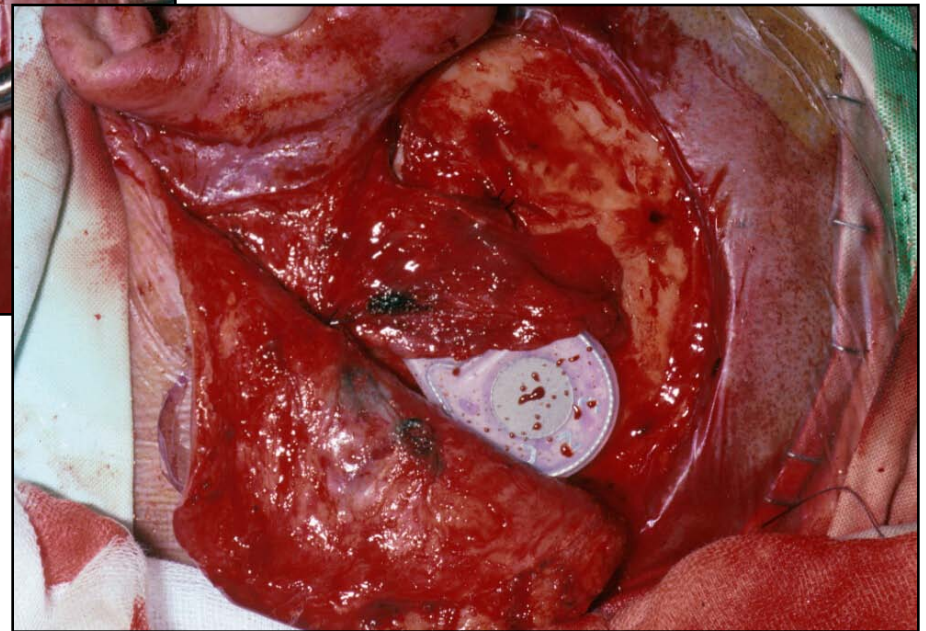


Radical mastoidectomy followed by mastoid obliteration

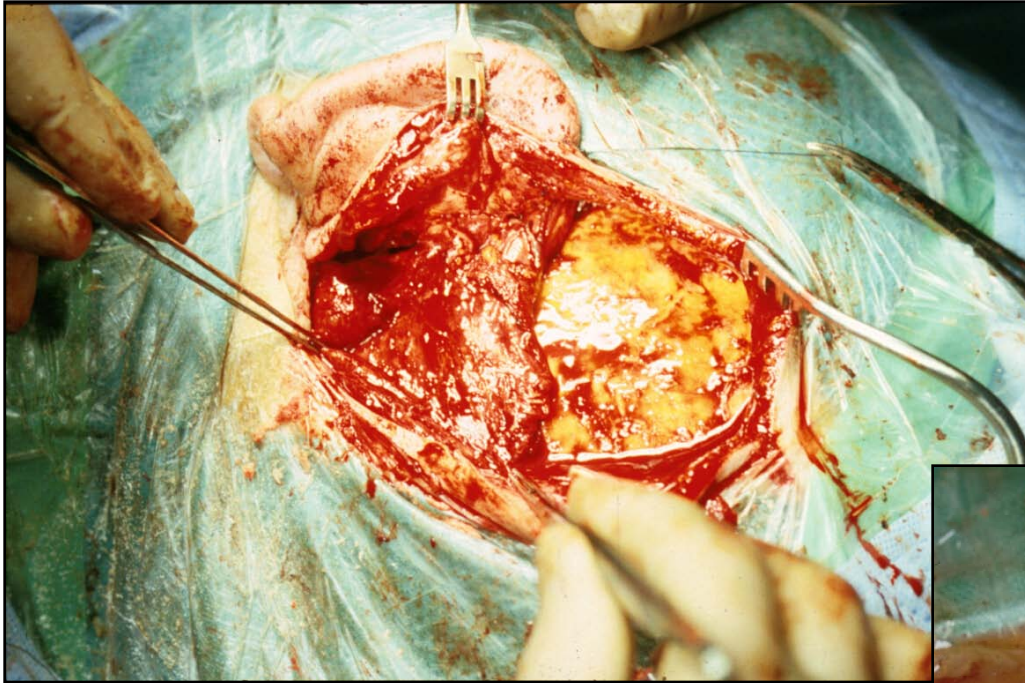
鼻咽癌與慢性中耳炎- one stage



Single stage implant
with obliteration

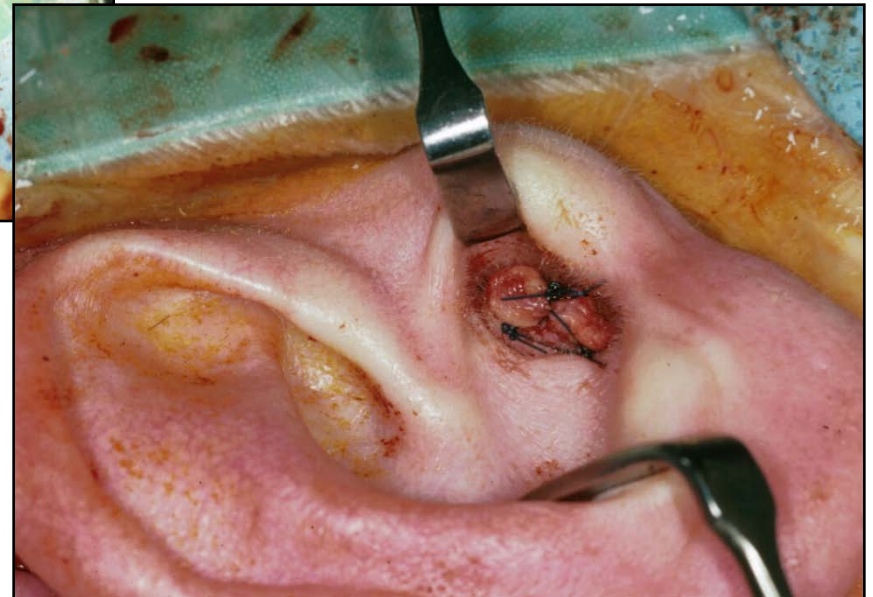


Mastoid obliteration

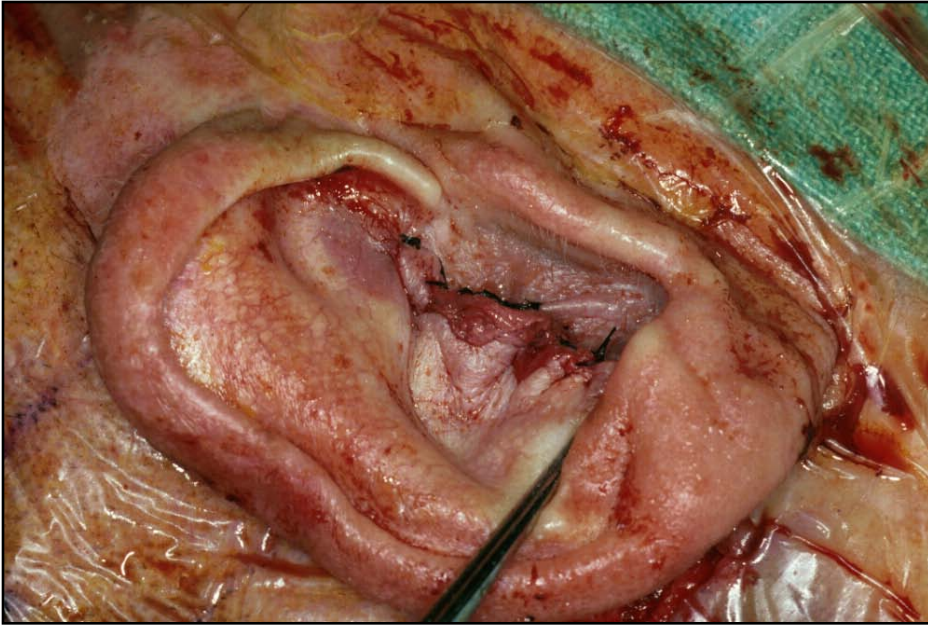


Temporalis rotation

Blind sac closure EAC



鼻咽癌與慢性中耳炎- one stage

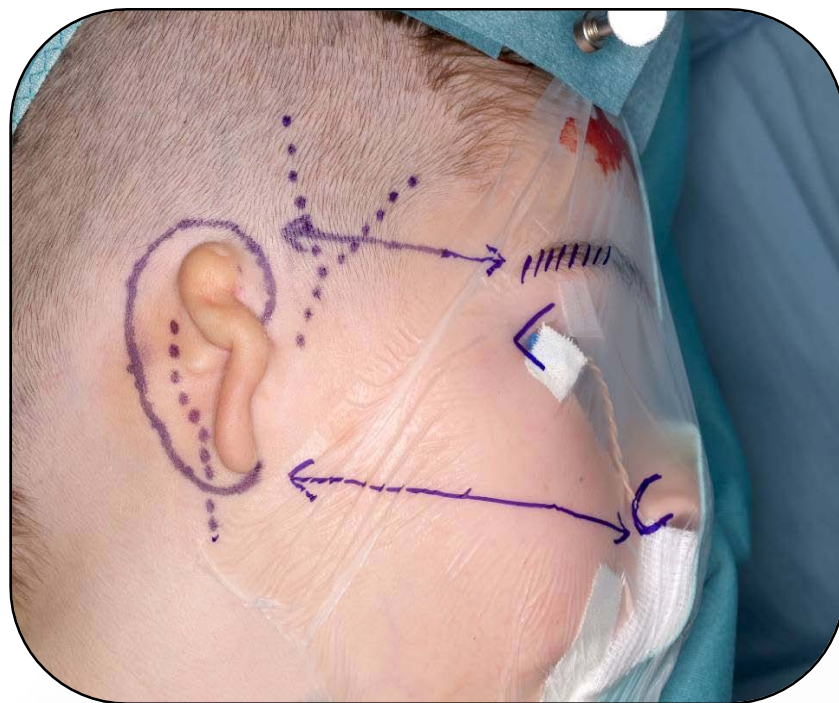
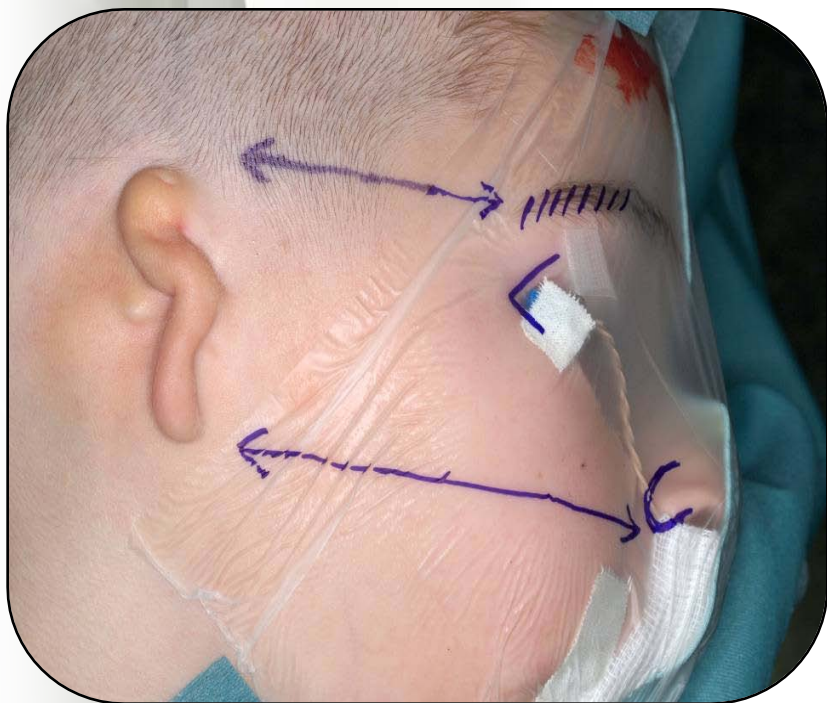


Post op CT scan

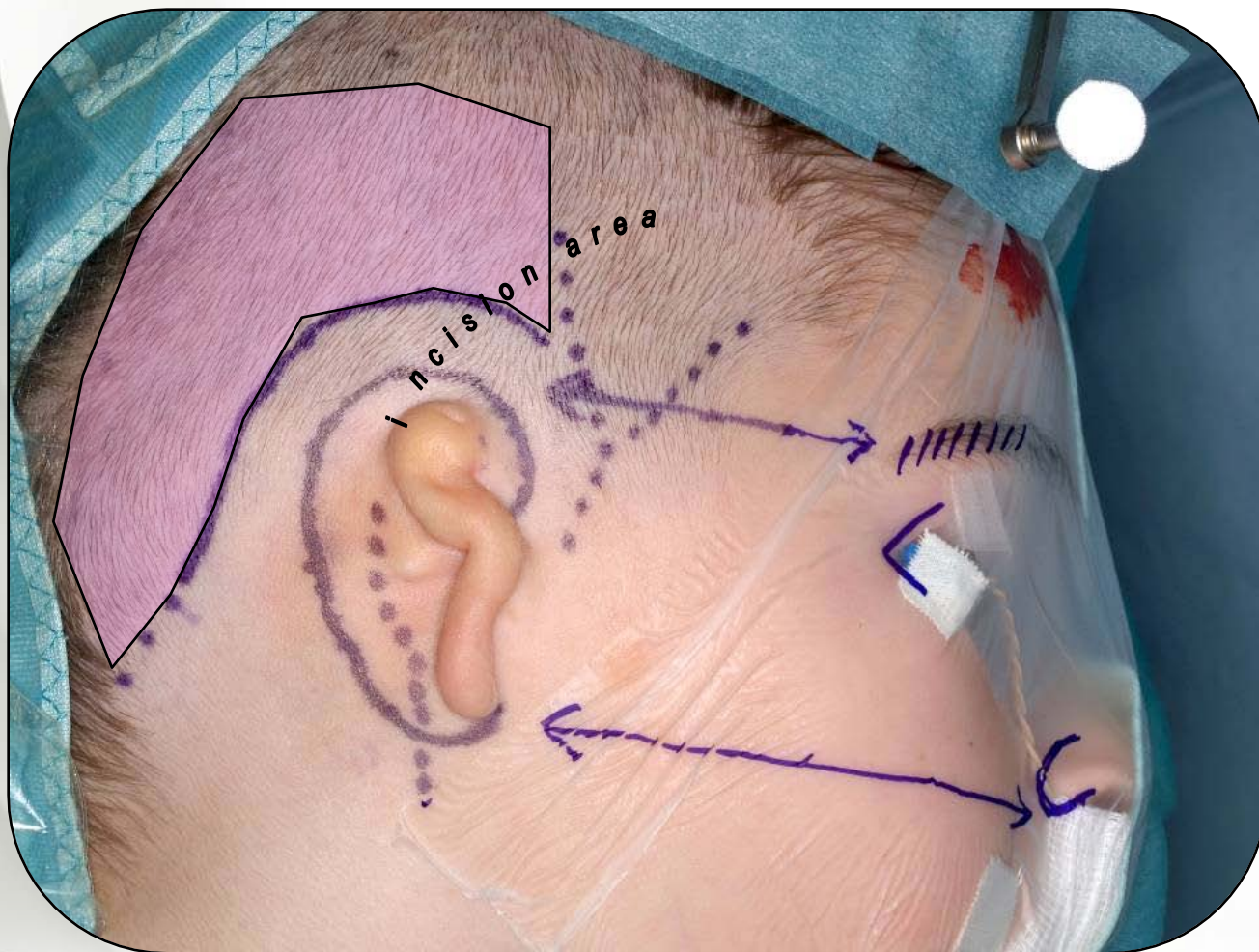
小耳症的切口設計



定位與找出血管位置

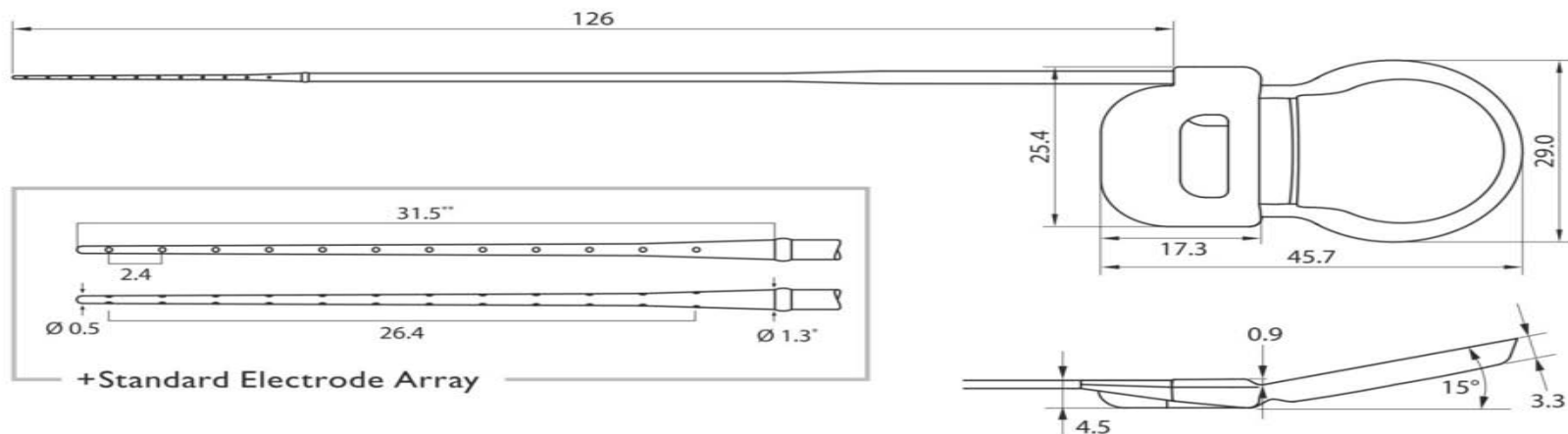


決定未來耳朵重建位置



挑選電極

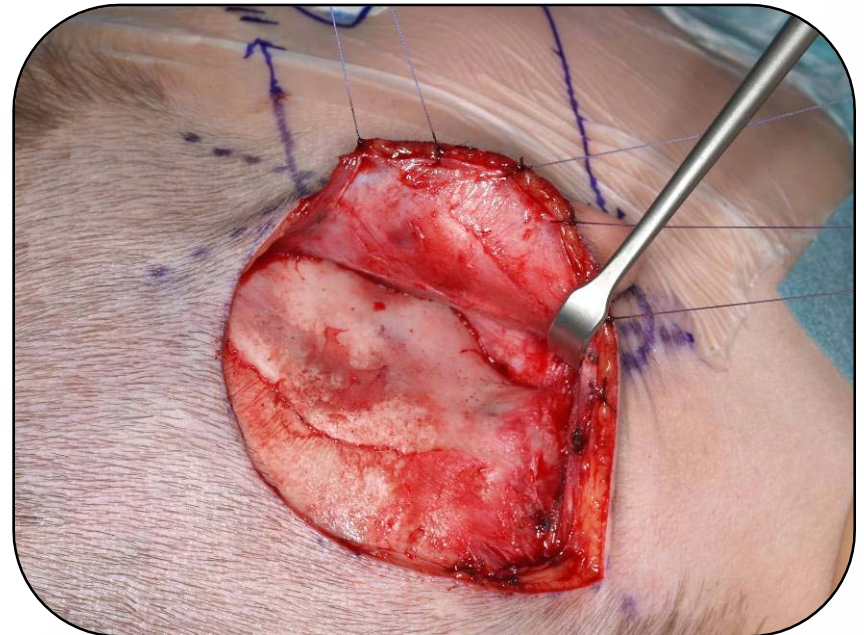
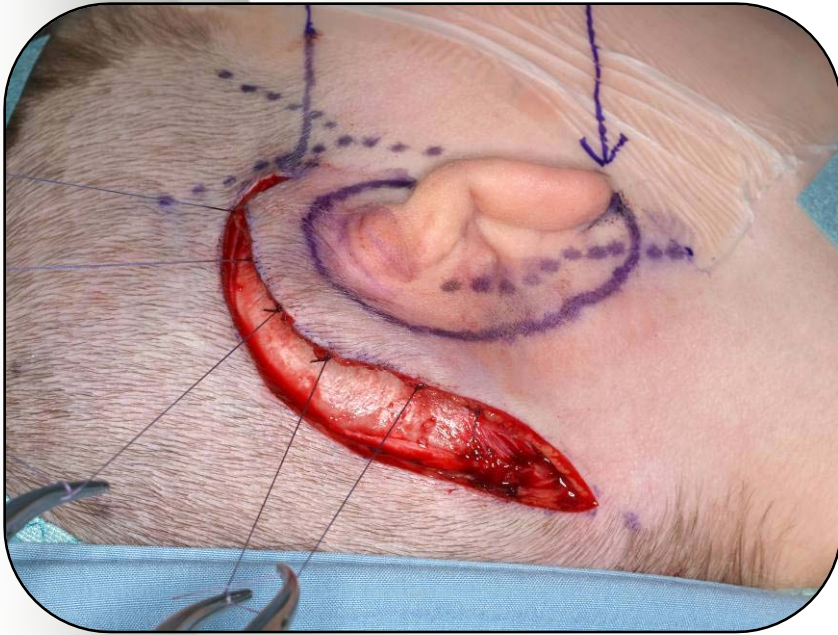
CONCERTO +Standard



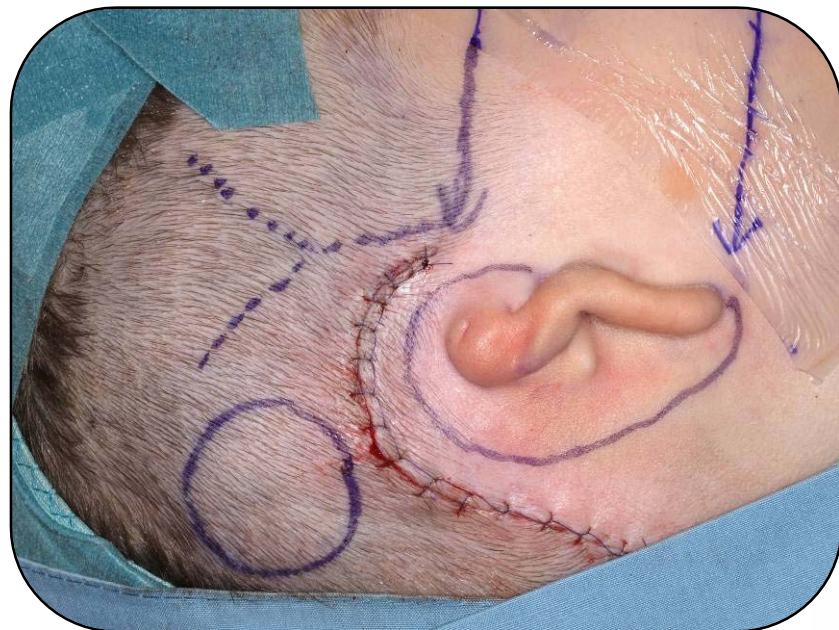
Dimensions of the Nucleus CI422



皮瓣翻開並保留血管



完成







人工耳蝸過去現在與未來



1.第一例是如何準備的?

- 向醫院提出計畫
- 去澳洲學習人工耳蝸手術及相關知識
- 申請衛生署及衛生局許可
- 大體老師上練習
- 建立聽語團隊



2.現在手術方法

- 耳後微創2.5公分
- 一定用面神經監測
- 不固定植入體(除非特殊案例)
- 有磨頭骨井
- 90% 圓窗植入, open round window
- 加壓包紮
- 24小時開機
- 調機: 1wk, 2wk, 1m, 2m, 3m, 6m, 9m, 12m, 18m.....



3.愉快經驗

- 1 小時完工
- 困難例：過程是痛苦，但完成時是喜悅的： CHARGE, otosclerosis, common cavity, microtia with EAC atresia, ossified cochlea, aberrant facial nerve



4. 第一例revision 原因

- 找不到耳蝸

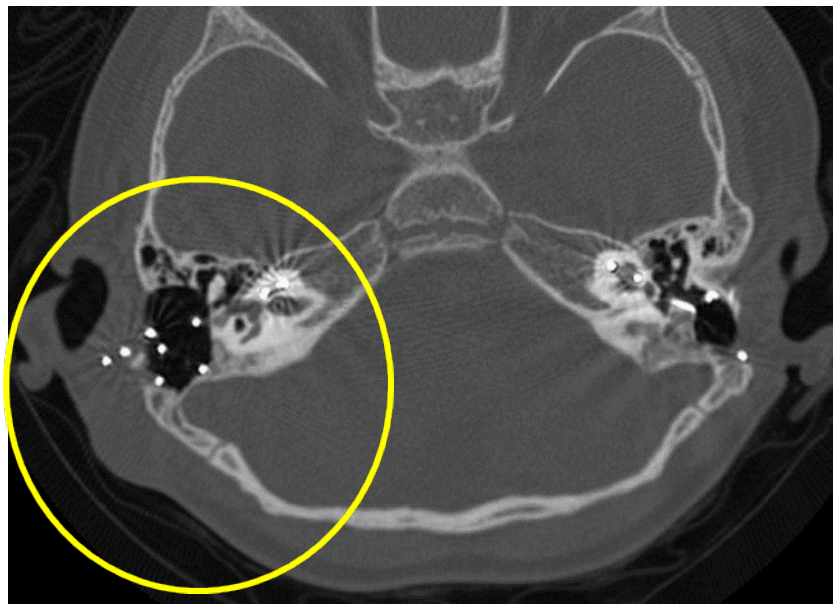
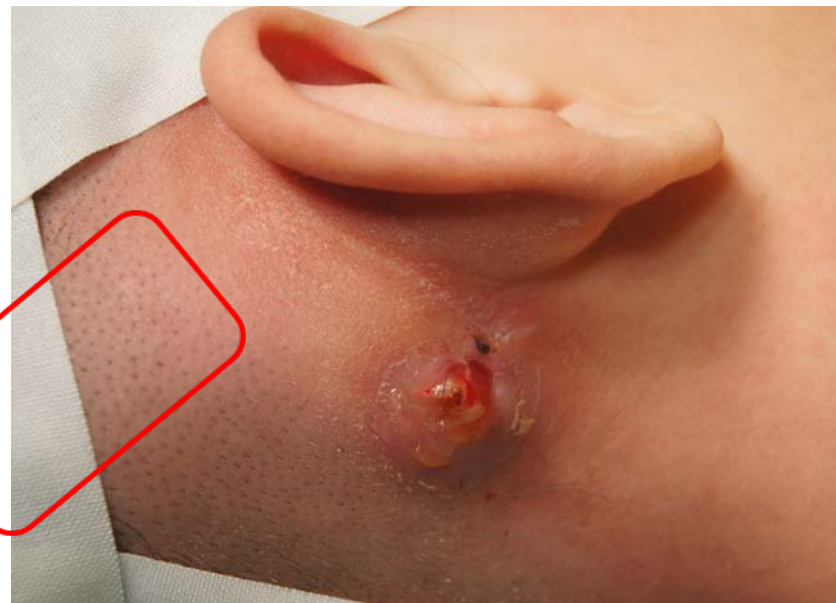


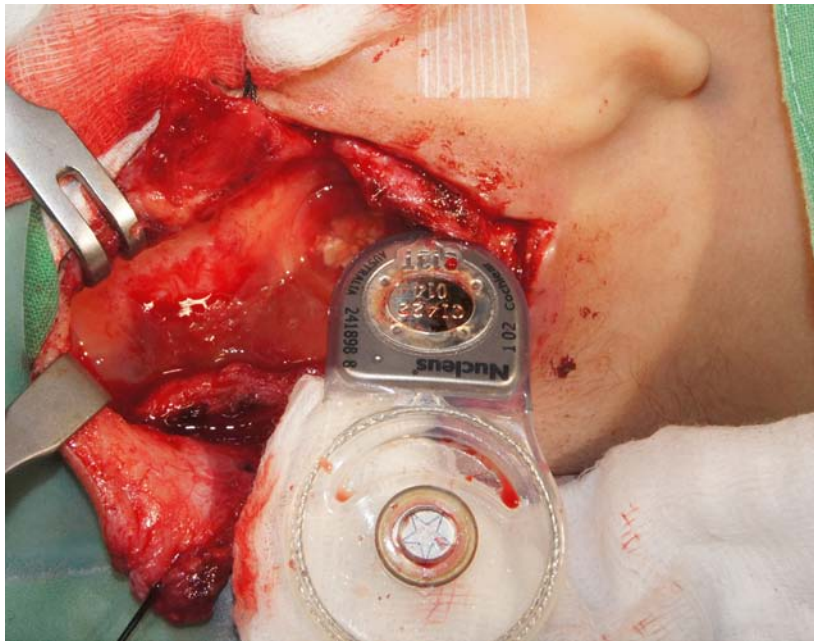
5. 第一例re-implantation 原因

- 放到前庭



6. 最慘痛經驗





7.台灣未來開放給付

- 全年齡雙耳
- 不受一次限制



8. 如何準備第一台手術

- 找靠山

9. 如果要做的久

- 極大的興趣

